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THE PHI DELTA KAPPAN

VOL. XXII JANUARY, 1940 No. 5

Editorial Comment

NATIONAL COUNCIL

THE EIGHTEENTH National Council of Phi Delta Kappa adjourned on Saturday, December thirtieth, after three days during which the personnel of the council labored diligently to plan for the biennium ahead. The following letter which is quoted without the consent of the writer, a delegate to the council, in my opinion expresses the sentiment prevailing generally among those in attendance:

"I want to tell you how much I enjoyed the meetings of the National Council of Phi Delta Kappa at Chicago last week. It was indeed a stimulating experience. Since I was initiated into ———— Chapter during a summer quarter, my contacts with the fraternity have been more or less perfunctory. Now that we have organized the Field Chapter at ———— I hope that my membership will have increased significance in my professional life. The national council meeting has done much to clarify my thinking concerning the fraternity and to give it reality."

The council proceedings represent an orientation if not a graduate course on fraternity problems to those in attendance. If those members who waver in their loyalty or appreciation of the potential influence of the fraternity could be exposed to a session of this legislative body of the fraternity, their interest would be restored, they would cease to doubt the effectiveness of the fraternity, hasten to restore themselves to the ranks, and accelerate the program through their participation.

Several proposals in the agenda were not only highly controversial but of long-standing origin. Naturally, decisions finally reached, although representing majority opinion, caused disappointment to some who had hoped for solutions more in conformity with their opinions. Notwithstanding this disappointment, there was a fairly universal sentiment that the fullest opportunity had been provided for discussion of all aspects of every question under discussion. The writer is convinced that those who are inclined to be impatient that changes in policy and philosophy which they espouse fail to obtain majority approval can do no better service to themselves or the fraternity than to retain their active membership in the fraternity and to strive patiently and persistently to convert others to their point of view. We must think of Phi Delta Kappa as an entity and not be diverted through our disagreement with a segment of its program with which we may be in more or less violent disagreement.

The growing importance of the office of District Representative in strategic functional services resulted in considerable increase in the budget for the District Representatives for the next biennium. The change in the election procedure which is recommended will save expense and avoid considerable loss of time. Provision was made for further experimentation with state programs under state coordinators.

Our publications are generally commended as fulfilling the expectations of our members. Adequate financial provisions were made for continuing the publication of special issues of THE PHI DELTA KAPPAN. The change to eleven issues a year of *Education Abstracts* should be reflected in a significant increase of subscriptions. The most effective sales force for our publications must be our members in the field.

Probably the most ambitious project ever undertaken by the fraternity is the Dictionary of Education. This is a cooperative enterprise of practical research nature which anticipates the participation of nearly two hundred collaborators. The committee in charge contemplates a contribution to education that will be not only unique but also highly useful.

Phi Delta Kappa must comprehend as its opportunity and responsibility leadership in discovering causes which retard the development of sane

educational progress. It must not fear to pioneer. It must not be bound too inseparably to tradition. It must capitalize more fully than ever in the past upon its abundant resources of intelligent, resourceful men who comprise its membership. I feel confident I can pledge you sincerity of effort on the part of your officers in making our program effective in conformity with the legislation of this council. We want to be your servants. We welcome your criticism and hope to merit your complete approval.—IRA M. KLINE.

INDUSTRIAL ARTS IN GENERAL EDUCATION

ONE OF THE important responsibilities of citizenship in the American democracy is that of active participation in the work of the community. Each citizen is a worker and a producer. He is also a consumer. In both of his capacities, his life is affected by the complex interdependence of all occupations. This is an age of industry—an age in which the manufacturing industries are extremely important for the well-being of the citizen. The general education of every public school pupil is not complete unless he develops concepts, understandings, and appreciations of the manufacturing industries and the involved relationships of manufacturers and workers and consumers. Industrial arts offers an educational field in which it is possible for the pupils to develop these concepts, understandings and appreciations. The public schools, beginning with the elementary grades, should provide opportunities for pupils to experience work, to appreciate that work is necessary and dignified, that industry is extremely diversified, that his individual interests and aptitudes should be tested, that constructive interests with avocational values may be developed, and that a knowledge and appreciation of the problems of the consumer should be developed.

Industrial arts may be considered to be a phase of general education in which the materials, processes, and products of manufacturing and the various activities of those engaged in industry are learned. Experience with tools and materials, as well as study of the industrial conditions of life, are necessary. Industrial arts has general values that apply to many levels of education.

Maris M. Proffitt, writing a committee report for the Commissioner of Education in 1934, stated that the functions of industrial arts were:

"1. Individual nature and need.—As a source of origin for industrial arts it is essential that a study be made of the nature of the individual and of his needs as found in all types of people, from early childhood to old age.

"2. Material cultures.—A study of material cultures of American society in a perspective of great world civilizations will reveal a fundamental origin of industrial arts. This origin refers to elements of utility, efficiency, and beauty in things that have been developed and used by man throughout history. This origin more than any other distinguishes industrial arts as a broad subject of study.

"3. Social-economic forces.—Social-economic forces and conditions which characterize present-day society and give rise to some of its perplexing problems cannot be neglected in a search for the origins of industrial arts.

"4. Educational thought.—A study of educational thought, or philosophy, and also history, is essential for discovering the origins of ideas about education in general and of industrial arts education in particular, as these express themselves in gradually evolving school programs."

In the planning of this special issue of THE PHI DELTA KAPPAN a definite effort has been made to confine the discussion to the topic "Industrial Arts in General Education." This limitation bars any consideration of strictly vocational or trade-training subjects.—W. H. A.

SPECIAL THANKS

In the planning of this special issue the editors have been assisted by Dean Albert F. Siepert of Bradley Polytechnic Institute, Peoria, Illinois; Dr. William E. Warner, professor of Industrial Arts Education, Ohio State University; by a number of industrial arts education leaders present at the November Manual Arts Conference in Chicago, as well as by the advice of all of the authors whose articles are printed, and of a number of other teachers in industrial arts education. For their assistance in formulating a philosophy in regard to industrial arts education and for their genuinely friendly expressions of helpfulness, we wish to make formal acknowledgment.

—THE EDITORS.

A Philosophy

By ALBERT F. SIEPERT

THE procedures and practices in education like those in government or industry are usually the result of various forces. The interaction of tradition, experiment, and analytical study of problems as they arise, bring about slow though not always uniform changes. Industrial arts has had a similar evolution.

John R. Runkle, a pioneer advocate of industrial arts teaching in the United States, based his proposed system of handwork upon the theory that such a course could be arranged and taught systematically as a valuable part of general education for all pupils, regardless of their further study or business pursuits. The methods he chose to achieve the aims were those appropriate to the various mechanic arts of his day. During the intervening period of more than sixty years, many new and sometimes differing viewpoints concerning both objectives and methods of teaching industrial arts have appeared. To the strictly technical function leading to manipulative skills, as well as directly related knowledge of materials, tools and processes, have been added many others. These include, among others, consumer education, occupational guidance, leisure time activities, and the development of certain desirable social attitude and character traits. Differences of opinion grow out of differing philosophies concerning relative emphasis upon such objectives as are included as well as methods of procedure. Such differences are disturbing to those not directly connected with the problem and sometimes give the impression of loose thinking, or hopeless confusion. Neither situation is necessarily true.

Let us, therefore, consider two rather basic matters in formulating our personal philosophy. First, while each subject, or area of pupil activity, in the curriculum may lay claim to one or more specific objectives, the likelihood is that few, if any, subjects have a monopoly. The very fact that the social studies are claiming some of the same objectives as industrial arts, and frequently sponsor both consumer education courses and guidance programs, indicates that others are appealing for the same public approval and support. Music, art, dramatics and athletics likewise clamor for leisure-time followers. Therefore, any program of industrial arts which in method and content duplicates the social studies or any other subject for that matter, is merely entering into somewhat needless competition.

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Secondly, all industrial arts activities come into the school program from industry. The materials, tools, and technical procedures grow out of experiment and application in the various subdivisions of manufacturing. These developments in industrial practice from one age to another came about through a careful analysis of procedures, of tool and machine use, of old or new materials to determine limitations, suitability and best procedures. Every workman in industry finds himself bound to observe definite rules, procedures and standards. If industrial arts teaching is to acquaint the school pupil with the products of industry, if the purpose is to orient the individual whose life is to be spent in a world so much dependent upon technology, then first-hand experience appears to be essential.

The history of handwork instruction in European countries indicates that in every instance, the experiment succeeded only after a careful and detailed analysis had been made of the trade, or craft to be taught. Only those most fundamental to the life of the times were so analyzed, thus, historically, limiting the practice for many years to the crafts depending directly upon wood or metal. Since working drawings were indispensable to the workman, they too, became part of the school program. The best workmen not only knew many facts relating to their occupations, tools, materials, and processes, but also were skilled to carry through any given project from design or plan to the completed article. While modern industry has created many minor jobs for the production even

of simple articles, school shops have tended to cling to the craftsman method of production. How can industrial arts modernize both content and method without the loss of essential values? How can a greater variety of materials be added and the "assembly line" plan of production with its management problems be made the usual industrial arts routine? Part of the answer is to be found in the historical approach indicated above. Analysis of present important industrial areas will indicate basic materials, processes, and organization principles. Further answer may be found in much recent professional literature dealing with state courses of study, magazine articles, and books concerned with theories, philosophies, and trends in industrial arts. A third set of answers comes from those concerned principally with actual practice in the public schools as they deal with questions of equipment and methods of teaching.

The teacher of industrial arts must formulate some definite philosophy to guide him in dealing with the varied angles of the problem of what and how to teach. Possibly a series of somewhat arbitrarily stated items will indicate a line of procedure.

(1) Industrial arts is an important element in general education because it provides opportunity for personal experience and learning by doing. Such experiences were the common heritage of all, during pioneer days, but are now denied to all youth except perhaps those living in rural areas. Whatever else may be added to or subtracted from industrial arts, the manual element of handling tools and materials is vital to the subject itself. When industrial arts becomes a "book" subject, or becomes largely a study of what others do, in place of emphasizing its initial regard for correct tool and material use, it loses its soul.

(2) Industrial arts is part of general education because more than in almost any other subject, the individual pupil rather than a class is the unit of teacher consideration. Here both pupil interest and progress may have adequate treatment. Individual differences are not only more evident, but are also provided for.

(3) Industrial arts is part of general education because it provides opportunity for practical consumer education. The selection, care, and use of the products of industry may be studied through textbooks, library references, observation, or discussion, but these become vitalized through genuine experiences in designing, constructing, operating, servicing, adjusting, and repairing. Only so is real appreciation and understanding of good design, workmanship and material developed.

(4) Industrial arts is part of general education because it assists in making provision for the leisure time of the present industrial era. Many men are finding genuine recreation from the routine of office work or mechanized factory production in a home work shop, but only as they have a background of training to undertake such activities successfully. Is there anything more pathetic than the recent comic of the rich man sitting despondently in an elaborately equipped home workshop while his better-half explains to a lady guest: "He's wanted such a place all his life and now he can't think of a thing to make"? The joy of self-expression through the leisure-time craft activities is dependent upon individual attainment of skills and information essential to successful completion of the self-appointed job.

(5) Industrial arts is part of general education because it affords the background for exploratory and try-out experiences helpful in occupational guidance. Only through genuine first-hand experience can we really discover interests and aptitudes. The auto mechanics teacher who very early had his pupil get down under a car "so he will get some dirt in his eye and grease in his hair," had a better approach to the discovery of aptitudes for auto mechanics than the teacher of social science, or industrial arts, who assigns a reference on workers in the automotive trades. There is ample evidence that only as prospective workers in the industrial trades have the benefit of a good industrial arts experience, can they make the most of later specialized industrial education. The problem not yet satisfactorily settled is the exact determination of subject matter to be included. The wide diversification of activities in modern industry makes it impossible to give adequate exploratory or try-out experience in more than a very few. A recent report of a collective bargaining meeting between management and labor in a large manufacturing concern indicated approximately 250 different pay roll designations. Although this particular factory produces a somewhat specialized product, it is evident that the industrial arts program of the community in which

the factory is located, would need a very elaborate extension of the usual offering to make some slight approach toward the goal of exploring the activities of just one factory. How much more difficult if the whole range of occupations is to be explored?

(6) Industrial arts, like any other subject found in the general education program, calls for adequate equipment. Two quite distinct types of shop equipment have been developed: (a) the unit shop in which there is sufficient duplication of necessary tools, machines, etc., to have all members of the same class doing essentially the same kind of work at the same time; (b) the comprehensive or general shop, in which the members of the same class work as individuals or in small groups, since equipment is limited so far as duplication is concerned, but more varied because of the wider range of activities carried on in the same room at the same time. It is obvious that each type of equipment has certain advantages and disadvantages so far as the achievement of ultimate goals is concerned. If the enrollment of a given school justifies but one shop then the well-organized and carefully supervised comprehensive shop offers a richer educational experience than a unit shop of the old-fashioned woodwork type of a quarter century ago. On the other hand, if there are two or more teachers, then unit shops through which pupils move in their training, will be more effective because the average teacher can do a better job of teaching with less diversity of tools, materials, and processes to direct. We must not forget that the city school has become graded, and that subjects have come to be taught by specially trained teachers, at least in part, because it is believed that this is an improvement over the ungraded rural one-room school. The chief item of concern to school administrators should be to note that each type of equipment calls for good teaching, and that neither kind alone may fully accomplish all that industrial arts has to contribute to education.

(7) Industrial arts, perhaps more than most of the subjects commonly considered as part of general education, calls for more than one method of teaching. The best way of forming habits of action as discovered by experimental psychology, has its place in teaching pupils the essential skills involved in successful manipulation of tools and materials. The best way of acquiring knowledge, and of being able to apply that knowledge, likewise finds appropriate use in industrial arts. Character education need not be neglected by teachers of industrial arts. Industrial arts has every right to be considered part of modern general education since it has long provided for active pupil participation. The "project" method found its first genuine application in this area. Initiative, creative thinking in problem situations as well as clear-cut illustrations of the results of right or wrong thought and action all find a place in the hands of a genuine teacher.

Bennett Library

The Bradley Polytechnic Institute at Peoria, Illinois, has recently been presented with the "Charles A. Bennett Collection" of books and pamphlets on industrial arts and related subjects. The collection may be classified in four divisions: (1) books purchased to complete the research work done in preparation for writing the two books "History of Manual and Industrial Education up to 1870," and "History of Manual and Industrial Education, 1870 to 1917"; (2) pamphlets, reports, and other paper-bound printed matter accumulated during the forty years as editor of *Industrial Arts Education;* (3) books of technical character and others containing courses of instruction published during the early years of the Manual Training Movement in Sweden, England, France, Germany, and America; (4) a few hard-to-find books on art and art instruction before the middle of the last century, and some books on the history and philosophy of education by representative American leaders.

Dean Albert F. Siepert of the Bradley Polytechnic Institute reports that the library of the institute, through the receipt of this gift from Mr. Bennett, is in a position to serve graduate research students in industrial arts and related fields in a much more adequate fashion than has been possible before. The library of the institute is working on classification, rebinding, and organization of the material, which contains more than 6,600 items.

Dean Siepert reports that, in the first sixty days after the first published report of the receipt of this collection, three inquiries were received from graduate students who plan to start immediately on the use of the material. Graduate and other students interested in making use of this material should write to the Librarian of the institute, Miss Lillian Guinn, at the institute, Peoria, Illinois.

Criteria of an Adequate Program

By EDWARD M. RODEN

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IT IS a large order to determine fully what constitutes an adequate industrial arts program and to discover if there is a serious gap between the desirable and the actual in any particular case. However, a specialist is not needed to arrive at some practical conclusions concerning such conditions.

In spite of some disagreement among leaders in industrial arts, it is quite possible to put forth some commonly accepted criteria for use in judging the adequacy of a program in this field. Much of the confusion and uncertainty as to objectives, methods, content and other factors is due largely to the fact that the field is of very recent origin as compared to most other school subjects. Generally speaking, a philosophy of a new curriculum area cannot be evolved and refined, to say nothing of being accepted, over a span of only a few years. However, the last decade has seen a truly remarkable development of the philosophy of industrial arts, the fusion of various elements and schools of thought and a trend toward the common interpretation of this field. This emergence of a considerable degree of unity provides a common background necessary for any discussion of factors constituting a desirable program for an individual school, a city or a larger unit of administration. Obviously there are a large number of criteria of such a program but only a few of the more important ones will be considered here.

Modern industry is so vast, so varied in its methods and materials and, in some cases, so large physically that it is impossible to represent adequately some phases of it in a concrete manner in a school situation. On the other hand, the field is so rich in possibilities for the school that there is little excuse for offering a narrow range of industrial contacts in only one area such as woodwork. A satisfactory industrial arts program will represent a careful selection of content from as many major industrial areas as is feasible. Each of these areas should be significant from the standpoint of number employed in the occupation and of the number and variety of tools and materials used. They should also be inherently interesting to adolescent boys and should be important from the viewpoint of the consumer. And certainly these areas should be rich in possibilities of correlation with other school subjects such as science, mathematics, social studies, drawing and others.

In recent years, the industrial arts areas finding most favor in the schools, particularly the junior high school, have been metal, wood, electricity, and printing (or better, graphic arts). Quite recently, textiles and ceramics have been making a determined bid to be ranked with the other four activities. Each of these in itself covers a broad field. For example, metal work might well consist of machine shop work, foundry, art metal, ornamental iron work, sheet metal work, and auto mechanics. A large school usually breaks down the total industrial arts content and offers it in two or more shops while a small school generally offers as many as possible of the suggested activities in a single shop. Regardless of the type of organization used, the program from the standpoint of industrial areas represented should contain both breadth and balance.

A satisfactory industrial arts program cannot be obtained when the objectives are confused. Claims for vocational preparation through exploratory industrial arts courses confuse and obscure the true function of this subject. True, it might contain a small element of training for a wage-earning occupation but so does almost every other school subject. Industrial arts teachers in general have neither the training nor background for vocational teaching, the equipment is usually inadequate, the pupils too immature and their vocational objectives too ill-defined. The sphere of industrial arts is general education for all pupils; that of vocational education, specific training for selected pupils.

Even when the vocational claims of an industrial

arts program are of minor importance, there is still confusion as to what pupils should take industrial arts. Modern industry is an outstanding characteristic of our present civilization. In this area, production, consumption and other social and economic factors vitally affect everyone, regardless of his occupation. A well-rounded general education demands that all pupils secure experience in this field of human endeavor some time during the secondary school period. A satisfactory industrial arts program should proceed on this basic assumption.

Provision must be made for a room considerably larger than a standard classroom, together with the proper service facilities and structural features. The permanent equipment such as tools and machines should be adequate both in variety and number to enable all pupils to perform the manipulative phases of the work. Industrial arts presents a complex teaching situation. Failure to provide adequate equipment and supplies increases this complexity out of all proportion to the economies effected. However, it is not necessary to provide heavy-duty, expensive equipment of the manufacturing or vocational school type. To a greater extent than in most other school subjects, a satisfactory physical setup is vitally important to a successful industrial arts program.

This subject has always recognized individual differences and emphasized individual instruction in a considerable portion of the work. The possibilities of such instruction are inherent in the work and are almost self-evident. The progression of each student at his own rate, a large number of levels of accomplishment, a considerable amount of pupil purposing and planning, objective evaluation and varied types of work to suit varied interests—all are easily possible but too often taken for granted. Are these conditions fulfilled when all pupils in a class work on the same individual projects at the same time? Or when the teacher assigns each thing to be made? Or when detailed instructions are provided from which no variation is encouraged? A good program must actively foster individualization, not merely admit that the possibilities are present.

As in other school subjects, the efficiency of the industrial arts program depends to a considerable extent on the teaching methods and learning situations provided. However, there are certain outstanding techniques which should not be ignored. Of course manipulation of tools and materials is basic. The wide range of processes, tools, materials and principles studied makes experimentation—real experimentation on the part of the pupil—essential. Since the work deals to a large extent with tangible things, pupil and teacher demonstrations are particularly effective. Carefully planned trips to local industrial establishments are necessary to provide learning situations which cannot be duplicated in the school. A variety of visual aids such as the shop museum, charts and posters, moving pictures, film strips and lantern slides, photographs, and pupil-constructed exhibits of processes, tools, materials, and methods of assembly should be emphasized. Of course the more common methods and learning situations should not be neglected. Certainly an industrial arts program would be considered inadequate if it neglected these interesting and efficient techniques.

In the past, formal education has been divided into a number of precise cells with little connection with each other. Mathematics could not trespass on social studies. Science and English rarely saw each other. Extra-curriculum activities were really "extra." Occasionally voices were raised in protest but a concerted and sustained attack was not made on the problem until recent years. A large number of educators have come to the realization that this situation provided a very unreal type of education—one quite different from the life people actually live. Modern psychology has pointed out very definitely the faults of this type of education and its remedies.

Correlation of various subjects has been a definite attempt to get away from this compartmentalized education. The much discussed integration has proceeded along a somewhat different and apparently more fruitful line. But what of industrial arts? The project has always been a central idea in this subject. This term means much more than the thing the boy makes. It denotes all the learnings which take place around a central core. In connection with the thing the boy makes, he should study closely related materials which are commonly recognized under the names of science, drawing, mathematics, history, safety, occupational information, sociology, art and other school subjects. For example, if a boy is making a short wave radio set, consider the possibilities of an efficient type of learning in each of the above fields, all

naturally tied to the making of the radio. This has been one of the foundation stones of industrial arts. A course consisting of only tool operations and the necessary technical information does not fulfill a definition of industrial arts. Such a course cannot be considered adequate to satisfy the aims of this subject.

While there are many other criteria of an adequate industrial arts program, certainly it should be characterized by breadth and balance of industrial areas represented, an adequate physical setup and methods particularly suited to this field. Individual differences should not only be recognized but provision should also be made for dealing with them in all phases of the program. The objectives should be well defined along the lines of general education and pointed toward all pupils, regardless of future occupations. Advantage should be taken of the fact that there is a large amount of cultural material clustered around the manipulative phases of the work.

It is evident that industrial arts cannot be a static subject as long as our civilization is dynamic. A fixed program is prohibited by this condition and also by the varying natures of the pupils. This demands a continual evaluation of the program by all concerned but in particular by those who formulate educational policies to be turned into action.

What Becomes of CCC Men?

By CHARLES D. SMITH*

What becomes of the young men Uncle Sam has taken off the streets because they couldn't find jobs, the young men enrolled in CCC? The answer is found in a survey conducted by the educational adviser of this camp. Incomplete returns indicate that at least half of them, shortly after leaving camp, get jobs. If complete figures were available, it is estimated that they would show sixty or seventy per cent of them are immediately employed.

It is evident that something has happened to these men while in this camp, something which has re-made them to the extent that employers now have confidence in their abilities; somehow the mysterious chemistry of camp life has changed them from unemployable to employable citizens.

What is responsible for the change, we can only conjecture. It may be the discipline of regular hours for work, sleep, meals, recreation, and evening classes. It may come from work experience gained here in camp where there are opportunities to learn not only manual labor, but also opportunities to learn how to keep records, use a typewriter, cook food, take care of the sick, run a stock room, manage a store, wait on tables, repair tools in the blacksmith shop, repair, maintain, and drive trucks, or to lead and direct the activities of other men.

Part of the change in the enrollee may be due to the fact that here a man must learn to live with two hundred other men; he must be able to forget selfish interests and become part of an effective team, organized for the purpose of preventing valuable soil from washing away. Probably the change that takes place is a combination of all these factors.

It is interesting to note what sort of jobs these men get when they leave camp:

Of the thirty-one men discharged between September 15 and October 31, this year—

Two went back to high school,
Two joined the United States Navy,
Two became spraygun operators in factories,
Two became farmhands,
One became a clerk in a department store.

Other discharged men accepted employment as factory machine operators, filling station attendants, dairymen, tire shop workers, and one former enrollee reports an excellent position with the Pearl Packing Company in southern Indiana. The lowest wage paid these men is a dollar a day with room and board and the highest is twenty-five dollars a week.

In no case, can these jobs be regarded as trivial or inconsequential because these men, before coming into CCC, *could not find employment of any kind*.

What becomes of CCC men after their period of enrollment is up? The answer is significant. They get jobs.

Visit Booth B-22
Attend Annual Tuesday Luncheon
While in St. Louis for A. A. S. A.

*Charles D. Smith is Educational Adviser, the Kendalville, Indiana, CCC Camp. He is a member of Phi Delta Kappa.

Child Growth

By R. LEE HORNBAKE

BY WAY of introduction, it may be judicious for the writer to present his meaning of the term industrial arts. Industrial arts in the elementary school is better known by what it is not than by what it is. Industrial arts has at least one unique aspect; namely, it offers youngsters many opportunities to manipulate material things. But it is through this characteristic of muscular manipulation that industrial arts is easily confused with other school practices. Three examples of these will be discussed briefly.

First, there is the elementary-school practice known as busy work. Busy work makes use of materials such as clay, beads, sticks, paper, raffia, and other media which the child can use at his desk. Typical activities include modeling in oily clay which is later collected and passed on to someone else, and random paper cutting. The primary purpose of such work is to keep the youngster doing something, without regard for finished product and with no concern for meaning, authenticity, or applications.

Handwork is a second type of manipulative activity that is sometimes confused with industrial arts. Handwork programs may be a glorified form of busy work. There are differences, however. One significant superiority of handwork over busy work lies in the fact that the child usually comes out with some product which represents an achievement. Emphasis lies in things made; activities are primarily, if not solely, muscular-manipulative.

A third type of elementary-school activity that is often confused with industrial arts is not so easily named as are busy work and handwork. This third type involves those "making" activities that illustrate or motivate work in certain school subjects. For example, igloos are constructed to illustrate the study of Eskimos. The construction enterprises carried on are said to stimulate the child's interests and efforts in some things that are not intrinsically attractive or meaningful.

If industrial arts is not synonymous with busy work or handwork and is not a mere motivating device, what then is its nature?

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From the writer's viewpoint, the following statements should characterize elementary-school industrial arts: (1) Industrial arts, as one phase of the total elementary program, sponsors "whole-school" values or objectives. While its contributions may be unique, industrial arts functions within the matrix of a unitary program. (2) Industrial arts considers socially significant problems that are typical of the industrial aspects of our democratic society. The child faces problems to solve rather than conclusions to memorize, or a pre-planned job to perform. (3) The sources of industrial arts problems and activities are elements of daily living such as one's food, clothing, home life, community life, and the occupations of relatives and friends. (4) Industrial arts activities involve purposeful activity on the part of the learner. (5) Industrial arts involves many forms of activity such as manipulating, experimenting, reading, observing, visiting, and reporting. (6) The opportunity to work with many materials is typical of industrial arts programs. A listing of materials would include clay, woods, metals, threads, leather, and various graphic arts media. However, an industrial arts program is not developed in terms of projects based upon these materials.

In summary, this concept involves (1) purposeful activity which (2) centers about a problem (3) chosen from typical human pursuits; such activity requiring the application of (4) many materials and processes that are dealt with in many ways. Industrial arts thus conceived is a comprehensive "social" study that deals with industry as a phase of society.

There is a second question which should be considered here. For whom is industrial arts intended in the elementary school? Boys and girls in elementary schools have similar needs and face com-

mon problems. Very little distinction can be made justifiably on a sex basis.

To be more specific, it has frequently, and falsely, been assumed that children who are slow in certain school subjects will be especially successful in things that involve manipulation. It is true that practically everyone can have satisfying experiences while handling material things. However, the kind of industrial arts now being discussed does not select its "beneficiaries" on the basis of aptitude or on the basis of rate of learning. It may be said without fear of contradiction that industrial arts is of special importance to the rapid-learning and socially normal child. Such a pupil will benefit more from a good industrial arts program than will the retarded child, just as he or she does from any other group of functional experiences.

The question of contributions of industrial arts to elementary-school programs leads directly to the heart of the matter. In the last analysis what industrial arts can do for an individual depends upon the individual. A detailed inspection of industrial arts *per se* will not yield these individual gains. Attempts to generalize usually lead to obscuring the issue. Despite this handicap, contributions will be discussed under two main heads, although these are not mutually exclusive. In practice they operate simultaneously and overlap.

Industrial arts offers the child many opportunities for expression as a natural basis for learning. What are the psychological and sociological bases for this statement?

The normal child, at the time of entering the elementary school, usually exhibits two marked characteristics. First, he thinks and acts in terms of things about him rather than in terms of ideas or abstractions. Second, he is strongly individualistic. These two observations are closely related in that the child, being individualistic, is concerned only with those things that mean something to him. The young child is not socially conscious; the rights of others mean little to him; relationships with other children are quite impersonal. The child does not show respect for others by being told that he should do so, for he has not learned that other children have desires, wants, and possessions just as he has.

Good teaching begins with the learner's status or stage of development regardless of what or where it may be. Change of status or growth is a function of well-directed experiences. Children will learn desirable behavior patterns only as they live in situations that require and approve such behavior.

Music, games, art, and dramatization, as well as industrial arts and other practical arts, provide experiences that are on the child's level. They also present conditions wherein socially desirable behavior can be learned. These types of expressional activity are practical, effective, and efficient ways for beginning and continuing the educational program.

It is quite normal for a child to express and to clarify his ideas by making things, through play, or in dramatization. Even cursory observation will reveal this to be true. A word may be said about the kind of achieving that characterizes industrial arts and several other arts fields as well. When one makes something from materials, the product can be observed, appreciated, and evaluated by others as well as the maker. We are interested, of course, in what the product has done and continues to do to and for the child rather than in what the pupil has done to the materials. But the fact that others can see and appreciate the accomplishments of the child makes for continued effort, achievement, and growth on his part.

Individual expression is basic to successful achievement, and achievement is essential for growth of any kind. Every normal person desires to express himself actively, and anything that thwarts this desire runs contrary to his nature. Failure to achieve success in some line of endeavor is one of the most potent factors in maladjustment. Delinquency usually results from an attempt to achieve a kind of success that is not socially approved.

Many youngsters attend school and then have little more to show their classmates, parents, and friends than a periodic report card bearing hieroglyphics, and later a certificate of graduation. If we are to recognize the fact that expression is basic to achievement and that achievement is basic to emotional stability and to social status, then let us seek those activities that offer opportunity for expression.

Industrial arts work is, of course, not confined to manipulative activity. Reading, visiting, discussions, and experiments are likewise involved.

For example, youngsters building a model farm will need to read about farms; they will perhaps visit a farm; they may experiment with different soils and they will discuss plans for building their farm before work begins and during the construction as well. Industrial arts activities make for complete and normal learning conditions.

As a second contribution, industrial arts offers children opportunities to develop understandings that are fundamental to intelligent living. In preceding statements it has been pointed out that children, by working, playing and learning with other children, come to respect the rights and wishes of others. But in what follows a broader social emphasis is implied. We speak continually of having the child understand his home and community environment. Yet the industrial phases of his home and community environment are largely neglected, despite their fundamental significance and constant nearness to the child.

The basic commodities—food, clothing, shelter, and the like—have always been supplied, but formerly the home was the center of this production. A child living in the early American family not only knew about these activities carried on in the home, but he also engaged in them. It was through participation in such home activities that many desirable traits such as cooperation, a regard for others, thrift, desirable work habits, and much that is included in the term "good citizenship" were learned.

The pioneer home housed an excellent activity program. The range of activities was limited only by needs and common sense. No one had to tell the rural boy of two generations ago that work is a necessary part of earning a living. Now that these industries have moved out of the home, the opportunities for developing elementary understandings as well as opportunities for purposeful participation have likewise been transferred.

We cannot hope to return to a more simplified way of living, even if it were considered desirable to do so. Nor can we expect the school to absorb all the neglected functions of other institutions. However, industrial arts as a study of industry, and as a study of industry's effects upon society, can offer the child means for arriving at understandings of things that are part and parcel of his everyday life.

Understandings or generalizations are not to be confused with facts to be memorized, but instead represent conclusions or attitudes which result from study and thought on the part of the learner. Generalizations do not appear in full stature at a particular age level. Children modify their beliefs (if they are intellectually held) as new data appear and as they learn to interpret data better. A more complete explanation should be apparent in the three generalizations which follow.

People are greatly dependent upon one another today. Even the simplest need or activity usually requires the assistance of many others.

Man has been very thoughtful in developing machines and in using them to produce goods, but man has not been equally thoughtful in controlling the results for human betterment. Unemployment, the housing problem, and modern warfare all attest to that fact. This understanding indicates to the growing generation the magnitude and scope of the opportunities and challenges which modern life offers.

Some expenditure of effort is necessary to earn a living. This is of especial importance inasmuch as Americans have in the past been spoiled by an abundance of free, rich land; readily available natural resources; and rapidly expanding home and foreign markets.

One could list many other generalizations that are of daily importance. Certainly they do not lie solely within the province of industrial arts, but industrial arts does offer an excellent approach to many of them and provides "raw materials" with which to work.

The writer views industrial arts as an integral part of any fundamentally sound elementary program. It is one phase of a total "arts" program which includes art, as it is conventionally considered, and other practical arts as well. There are, of course, other areas of activity in the elementary school that are equally essential or even more so. But there is little merit in arguing or weighing the respective provinces of subject areas. The psychological nature of children and their sociological needs should be the point of departure in developing an elementary program. The functional nature of the arts is obvious as psychological and sociological factors are analyzed. Sounder and more efficient elementary programs will result as these analyses are made and as their suggestions are heeded.

Adolescent Development

By GORDON O. WILBER

AMERICAN secondary education parallels adolescence and falls heir to all of the physical, mental, and emotional changes characteristic of that age. Any serious attempt to meet the needs of youth through the medium of the school program must consider these changes in which adjustment toward maturity is to take place.

At a time when the school program was concerned mainly with the preparation of youth for adult participation, little consideration was given to the everyday problems of high school pupils. Modern thinking indicates that attention to the immediate personal, social, technical, economic, and other problems of youth constitute the foundation for a secondary-school program.

It should be evident that activities designed to function realistically in the solving of youth's problems will be influenced by the type of society in which the school is found. Much has been written to show the implications of the shift from an agrarian to a highly industrialized social organization which has occurred in this country during the past century. That the boy and girl of high school age is vitally affected by these technological developments and population shifts is readily apparent. A more recent development has been the rise of totalitarian theories and governments, to which our own democracy stands in sharp contrast. It therefore is essential that the school consider the needs of its students as these relate to living in an industrial and democratic society. It is in this connection that a modern day program of Industrial Arts can make a significant contribution.

A study of the literature concerning the needs and guidance of youth reveals the repeated use of such terms as exploration, guidance, orientation, consumer literacy, avocational or recreational opportunities, industrial-economic society, technical knowledges, social attitudes. These are suggestive of many points of contact between youth and society. Close study of these terms leads to the conclusion that many of the problems involved can be greatly clarified and rather fully interpreted for young people through a comprehensive study of modern industry and its relationships to life as a whole.

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The manner in which Industrial Arts will function in a particular situation depends to a great extent upon how the school is organized. If the curriculum is developed around a central core of pupil problems and experiences, then industrial arts finds its place whenever these problems relate to industry and its products. The industrial arts teacher will work in such cases with the others assigned to the core groups whenever the opportunity arises.

Where the core approach is fully developed, there is a prominent place for a comprehensively developed industrial arts laboratory. In the large percentage of schools still organized along subject-matter lines, the need is no less urgent for an enriched and diversified program of industrial arts to serve as a means for orienting youth to their industrial environment and preparing them for wise participation in it.

Clearly the "manual training" or "manual arts" type of program which confined its activities largely to woodwork and drawing was pathetically inadequate. Industrial arts must be broad in its coverage of industrial materials, processes, and products, and its organization must be flexible if the needs of all boys and girls are to be reasonably met.

It will be apparent that such a study will have many sequential and concurrent phases. For example, while some students are studying the materials and products of industry, others will be considering organization and personnel. The program involves an abundance of manipulative experiences for all pupils in the making of a wide variety of individual or group projects. The need for group discussions and committee work will be

recognized, as well as the value of investigations and experiments.

The need for careful planning of all phases of the work will be recognized. This applies not only to the general planning done by the instructor, but also to the working out of individual and group problems by members of the class. It is here that the drawing area finds its true place in the modern program.

Another phase of such a study is the first-hand observation of industrial processes. Modern industry is an unknown quantity to most young people, and actual acquaintance with its various manifestations is an important part of the industrial arts program.

Where a program such as this is carried out successfully, it will certainly not stop at the school doors, but will be carried into the work and play life of the pupils outside of school. The industrial arts teacher should be fully conscious of the opportunities for improving the school program by encouraging these out-of-school activities.

A more detailed description of the various aspects of an industrial arts program should serve to clarify the content and methods to be used in its interpretation in the school laboratory.

There are several reasons that an adequate study of industry must include a large amount of manipulative work by the student. If interest is to be maintained, opportunity must be given for students to exercise their urge to handle and work with tools and materials. Further, it will be found that those phases of industry which can actually be made the basis for participation are learned much more easily and thoroughly than those where only incidental or narrow sampling is possible.

In analyzing the manipulative experiences of the industrial arts program there are a few special points which the writer believes should be emphasized: (1) Approximately seventy-five per cent of the total time given to this subject should be devoted to actual manipulative work. Reduction of this percentage has been found to cause loss of interest. (2) Manipulative work of a repetitious type should be used with discretion. Most students tire of a given sequence of processes rather quickly, and beyond that point educational returns are likely to be insignificant. (3) It is necessary that participation be on a broad and enriched basis. It is not enough to confine the experiences to one type of industry or to a single group of materials. Manipulative activities should be available with such widely diversified materials as the various species of wood, kinds of metals and alloys, types of electrical apparatus, papers, clays, textiles, and so on.

Manipulation cannot be considered in the abstract. It must be directed toward some material or problem and should be directed toward the creation of something which adds to personal knowledge or equipment. From the instructor's viewpoint the project is usually a means to an end —that end being a better understanding of industrial society. To the student, however, the project is of first importance—an end in itself. If the project is a suitable one, if it has been chosen with care, and if it reflects the student's interest, then it should represent the fulfilment of a desire for expression with tools and materials. In order to be of greatest value a project should represent a desire on the part of the student to make a particular thing or to experience a particular situation.

Manipulative experiences do not represent the only important features of a vitalized industrial arts program. Another means of supplementing an understanding of the many problems of a social-economic environment relates to the use of individual problems or investigations and group discussions. Students are naturally curious about the industrial life which goes on about them.

The skillful teacher will develop many techniques for "setting off" studies and interchanges of ideas among members of his class. A short newspaper article on some social problem of industry or a cartoon or picture may well serve as a basis for discussion, investigation, and report. The industrial motion picture is also used with success.

In any study of industry and industrial society such as is here being considered, one must inevitably recognize the importance which modern progress places upon research and investigation. A phase of industry which seems so important and which has in it so much of the spirit of adventure should certainly find a place in industrial arts programs. A new type of activity in the laboratory is essential; an activity more nearly akin to the experimentation of the worker in the chemical or physical laboratory. A new type of equipment will also need to be added for this work. One will expect to find in the industrial arts laboratory of

the future such devices as pyrometers, Brinell and Rockwell hardness testers, tensile strength machines, and microscopes designed to study the structure of woods, metals, and textiles.

But even without additional equipment there are numerous problems arising every day which lend themselves to experimental solution. The following are examples: (1) What kind of flux is best for soldering copper to tin plate? (2) Why do some kinds of lumber warp more than others? (3) Why does shellac sometimes turn white when applied to wood? (4) Why does paper seem to feed into the printing press better on some days than on others? (5) How can a blued finish be secured on steel? (6) What is the effect of fast (or slow) timing on motor performance? (7) What are the relative wearing qualities and strength of linen, wool, cotton, etc.? (8) What may be used to etch aluminum? (9) How may solder be removed from copper?

These are only a few of hundreds of problems which should be made the basis for student investigations in the industrial arts laboratory. Such studies will help in the development of a scientific attitude and method of attacking problems, and will extend greatly the knowledge of industrial materials, processes, and products.

Educators are well aware of the important role that planning plays in a democratically projected program, and Industrial Arts teachers are recognizing the indispensable part which it must play in their laboratories. The ability to plan various details of a study of industry is considered to be just as important as the ability to execute those plans. Certain things are involved: (1) Opportunity for individual and group planning should be made a definite part of the program. (2) The many techniques of planning should be demonstrated, illustrated, and checked. (3) Each laboratory must be supplemented with a quiet, clean, and well-lighted planning area or special planning room that can be used at all times. (4) Books, magazines, trade literature, and other reference materials must be provided. (5) An organization including personnel which emphasizes the importance and necessity of planning must be developed. (6) The use of instruction sheets and formal series of projects that dictate all procedure and eliminate opportunity for planning must be seriously questioned.

The process of planning encompasses several types of individual and group activities such as selecting a suitable project or problem; making a preliminary sketch, drawing, or plan; checking upon available supplies and facilities; making the necessary adjustments to utilize supplies on hand or to secure the supplies or arrangements needed; and making final drawings or plans. If industrial arts is accepted as involving a study of industry and industrial society, then the details of any study unit must grow more or less from the group and follow within a broad outline the interests which arise within the class.

All the ramifications of a study can hardly be foreseen from one term to the next, much less written up in its entirety within any one text. Rather must there be a wide variety of reference materials covering all phases of industrial activities. These should be available for study whenever a new problem presents itself. Such material will include not only the best books available, but a variety of periodicals, trade and industrial literature, catalogs, and government reports. Administrators will make it possible for a number of these to come to the laboratory and teachers will recognize that many valuable experiences may be gained by having students collect many of the study materials needed on individual problems.

Study is indeed an important and obvious phase of industrial arts. It should accompany and facilitate the various manipulative activities. It will of necessity be a part of every problem of investigation and research. Planning can be only superficial without study, and group discussions should be both preceded and followed by the use of reference materials. The modern industrial arts program should lead to more, not less, study, but it should be a type of study which students will carry on because they see the need for the information. The efficacy of formal assignments as a means of teaching industrial arts subject matter should be carefully evaluated. It is hoped that a predilection for those methods which are reflected in life situations will continue to direct both new and experienced industrial arts teachers away from a formal study program.

While most industrial arts activities have been assumed to be a part of an organized school program, many important learning situations are

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In the Elementary School

By FRED C. WHITCOMB

IN THE development of a real educational program of practical arts* in general education the elementary school has been sadly neglected. Certain aspects of this area of education, such as music, art and physical play, have received considerable attention. But the handicraft aspect often has been little more than busy work or a series of formal technical processes carried down to this lower level of the school from the secondary level. This has occurred even though one of the principal concepts of modern education is "learning by doing." On the other hand, practical arts might well be made the basis of all learning on the elementary level.

Each level of education has a distinct place in the program of general education. Today elementary education is considered as the period in schooling covered by grades one to six inclusive. Here the primary adaptations of reading, writing, and numbers and the primary social adaptations are made.[1] They correspond in part to the traditional 3 R's. To these Bonser[2] adds the adaptations of primary drawing and making, which are essential in this modern industrial age. These are the necessary "tools" of learning.

For a more comprehensive and adequate expression of the function of elementary education, again we may cite Bonser.[3] He says, "It is the purpose of the elementary school to provide experience in meeting the common needs of all, regardless of sex, vocation, or social status. Its content is made up of those activities in which everyone must participate with like degree of knowledge and skill and with like attitudes and appreciations, in order that there may be a unified, efficient and stable social life. Its activities, values, and ideals may be regarded as the common denominator of life for the whole nation."

Also, ". . . its purposes are to provide that general basis for health, equally desirable for all; to develop that practical efficiency in activities shared by all in daily work and intercourse; to develop those ideals and habits of civic and other forms of group activity of equal value to all; and to cultivate interests and means of recreation common to all." These are alike in interest and value to boys and girls.

Curiosity in and the desire to manipulate the practical things of life about him are early manifested in the young child, even before he reaches school age. All education is obtained through experiencing. Any new experience must be built upon preceding experiences. Again, the child selects for his activities those of his elders. These adult activities are largely of an industrial or practical type. Just as in physical play developing experiencing leads to physical growth, so will developing experiencing in the practical affairs of life lead on to intellectual growth and understanding.[4]

Thus, not only because in the practical activities of life do we find need for the primary tools of drawing and making, but also because in these practical activities we find the opportunity for cultural development, is there a vital place for them in the beginnings of systematic education. Culture is that which takes place in the learner. To the young child that only is culture which has meaning in being based on his experiences.

Dewey[5] would have school as life instead of just as a preparation for life. To have the school approach the manifold activities of life is not an easy matter. Through practical-arts activities the nearest approach to life is found. They must be simplified, however. There has been (and still is, if one may judge from prepared courses of study) a tendency to bring down into the elementary school the technical processes of secondary education. Too often these processes proper belong only

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* The writer prefers the term "practical arts" to represent that experiencing area in the school in which the manipulation of apparatus and the use of material are vital means of learning. See Morrison, Henry. *The Practice of Teaching in the Secondary School.* The University of Chicago Press. Chapter XXI.

to vocational education. The formal discipline of manual training days still persists in general education on the secondary level in many schools. Then, when a program is being prepared for the elementary level the same philosophy of training and skills is employed. Note such activities as formal cardboard constructions of a geometric type, knife-work, tool processes in woodwork and metalwork, et cetera.

Practical arts as an area of education is so rich in opportunities for child experiencing of a freedom and informal character, scarcely to be found in other areas of education, that there is no excuse for retaining activities long since discarded in modern educational philosophy. Too often the practical-arts activities of a school represent the most formal part of its program. We have social studies, nature study, number, free reading but still retain "courses" in manual training.

Considering the aims of modern education on the elementary level, it seems that these can best be met in the practical-arts area by setting up the following conduct objectives:[6]

1. Acquiring the primary adaptations of simple skills in drawing and making. Naturally the control techniques required in the projects on this level must be very simple and those requiring little physical strength.
2. Meeting simple practical needs in school equipment and supplies. Often meeting these school needs will suggest similar home needs which these children will be able to meet.
3. Performing practical activities which will aid in the understanding of other school subjects. This ties up somewhat with "2" above. These experiences will vitalize other school work.
4. Acquiring more general understandings in the many practical activities of the community in which the children live.
5. Appreciation of values in the performance and products of the activities of the arts and industries in a socio-economic civilization. An exceedingly valuable objective of the elementary level of education.
6. How "materials" function in the processes of learning. Akin to "5" above.
7. Acquiring (under direction) the ability to plan in a learning unit.

Elementary education should correlate closely with the child's everyday life in the home, in the school, and in his outdoor activities.[7] Both Bonser[8] and Schweickhard speak of the importance of use in the selection of learning activities for children. The very young child does practically all of his thinking in close connection with physical and material activity. To get results all school activities must be developed with these media.

The regular grade teacher should contribute largely to the organization on the elementary level. It is especially important that the child rather than subject matter be the basis of organization. The practical-arts teacher or supervisor may contribute his technical knowledge and experience in making suggestions regarding materials, tools, and processes. But the selection of activities applicable to the interests and needs of the elementary child and the opportunities for correlations and integrations within the general school program should be left largely to the regular room teacher.

Each level of education has its own characteristics. The control and conduct objectives vary for each level. Likewise, the general character of the learning units[9] will vary. These units will bring about primary adaptations. They will not be of the sort that can be mastered in a rather short period of time as is the case with the units on the higher levels of education.

As has been stated heretofore, the practical-arts learning units on this level involve largely the primary adaptations of drawing and making. These are the characteristic activities to be used in the practical-arts field of education. However, they do not suggest the units. Drawing and making represent the forms or modes of expression just as verbal activities (oral and written) represent the modes of expression in the so-called 3 R's.

The desirable conduct objectives were stated above. Our present problem is to list several definite learning units which should aid in the realization of each conduct objective. While all that the school can do is to set up control objectives which would seem to lead to the broader conduct objectives of life,[10] the nearer these control objectives are to the conduct objectives the more apt are the latter to be realized. This fact must be kept in mind in organizing units on all levels of education, but more especially in organizing units on the elementary level.

To the pre-adolescent child, especially, the school is life,[11] and consequently the conduct objectives can be realized almost directly through the learning units of the school. Usually each of these units will, in the point of time, extend over one year and possibly even the entire elementary period. They will be recurring. They will have close

correlations at all times with the entire school program.

May we now consider the broad conduct objectives of the elementary school, as stated above, and suggest learning units.

1. Acquiring the primary adaptations of simple skills in drawing and making. Units should be functional in every case. Skills of all sorts are means to an end. Consequently no units will be arranged directly for this conduct objective. The essential skills will be reached indirectly through the functional units arranged for the other conduct objectives. This is as true in the drawing and making adaptations as in the primary adaptations of the 3 R's. As an example, the primary reading adaptation is not just learning to read, but to get others' ideas as found in books and elsewhere, to have enjoyment of this sort, etc.

2. Meeting simple practical needs in school and home equipment and supplies. A number of units are clearly recognized here. Several units are suggested. All of these are strictly functional. It will readily be seen that primary skills in drawing and making are required in each unit.

Unit I. Making tablets, notebooks, cards, etc., for various school and home needs. Simple activities of laying-out sizes, cutting paper and cardboard, gluing and pasting, simple decorating, and others will be required. To have this unit more definitely functional the above articles to be made (each a project) should be planned for some specific school course, such as spelling, or some home or play need, as getting ready for a party.

Unit II. Planning, making, and stocking a small aquarium or other equipment for nature study or elementary science. Other units will occur to the elementary teacher.

3. Performing practical activities which will aid in the better understanding of other school subjects. Unit II (above) would do this, which illustrates the fact that the units necessary to reach all of these conduct objectives are overlapping and cannot be realized during a set period of time or learning.

Unit I. Planning and constructing a home situation, an area of land and water, etc., on a sand table.

Unit II. Planning and constructing a colonial scene, such as a fireplace with its equipment, out of cardboard, etc., to illustrate aspects of social studies.

Unit III. Planning, constructing, decorating, and equipping a cardboard house or other building.

4. Acquiring more general understandings in the many practical activities of the community in which the children live. The teacher will see opportunities for the development of many appreciations, also, with the units under this objective.

Unit I. Constructions in cardboard and other materials representing modern home scenes, industries, business houses, farm and garden situations, etc.

Unit II. Planning, preparing, and serving lunches, getting ready for a picnic, etc.

Unit III. Planning and constructing equipment for a play or other entertainment, club, or party.

Unit IV. Planning and making equipment for indoor and outdoor physical education or sports events.

5. Appreciation of values in the performance and products of the activities of the arts and industries in a socio-economic civilization.

Practically all of the units suggested above should do this if properly presented by the teacher and carried out by the children. It is neither educationally desirable nor practically possible to set up distinct units for this purpose. Significant values for practical-arts activities are implied here. A large part of the work of the world—the world of industry—uses materials and appliances possible to be brought to the attention of the pupils and often used by them in the simpler forms.

Laboratory work should be supplemented by visits to industrial plants, buildings in course of construction, model homes, sidewalk laying, etc.

6. How materials function in the processes of learning. Henry Morrison says that practical arts in education is "concerned with processes which involve the manipulation of physical material and the intelligent operation of appliances."[12]

Frederick G. Bonser[13] states, "The purposes or outcomes of the general study are realized in the degree in which it helps one to become efficient in the selection, care, and use of the products of industry, and to become intelligent and humane in the regulation or control of industrial production. . . . Every purchase we make brings up a problem of both the quality of the material and the proper money value of the article secured. How are we to know what foods to select which will give us just the kinds and amounts needed at a cost that is within our means? . . . whether a given textile fabric . . . is of good material . . . the real values of pieces of household furniture, of utensils, of table wares. . . . We learn of the materials entering into these products." Bonser further states that the five dominant industrial materials are foods, textiles, woods, metals, and clays and other earth materials. Separate units need not be arranged for the realization of this objective.

7. Acquiring the ability to plan for a project in a learning unit.

Naturally planning on the elementary level of education can be only a primary adaptation just as the adaptations of reading, writing, and number can be only primary adaptations. In other words, all adaptations on this level are to be considered only in their simple aspects essential to all learners. To be able to express, in simple form, ideas through drawing or making is essential to the elementary education of all learners in an environment in which, to such a large extent, these forms of expression are essential. Planning is a vital part of the drawing adaptations. The difficulty many teachers will have is to mistake the meaning of the primary planning adaptation and make the work too technical. It will be technical only in its simplest aspects.

To plan is to have an idea (a need or an interest of

a specific nature), to decide upon the needs of the project (a simple drawing, in many cases, materials needed, dimensions, how it will be constructed, tools to be used, decoration and finish if needed, will the project serve its purpose, etc.). As has been stated before, these items will be considered in a very simple manner. In no other areas of the school will the opportunity for planning (and learning to plan) be so available as in practical arts. Separate units or activities for the realization of this objective should not be set up. Every unit and every project within any unit will provide, and more or less require, the activity of planning. If done thoughtfully, planning will carry over into all other areas and units of the educational program. Planning has similar activities and concepts whatever may be the objective of the unit or the level of education.

As has been stated above, the elementary level of education considered in this article refers to grades one to six inclusive. It was also stated above that the regular room teacher should have a major part in the organization of the work of the elementary school. It would seem desirable also that the major part, at least, of actual teaching in practical arts be done by the regular grade teacher. Special teachers may help plan and assist in teaching. At all times such special teachers should be consultants. Such special teachers are apt to make the work too technical.

The ideal physical setup would be to have a "crafts" room in connection with each regular class room or one for each two or three rooms. But in small schools probably the regular class room will have to be used. Occasional resort to the school shop will be advantageous. The equipment should be simple and not expensive enough to discourage its installation. Such an arrangement makes possible a program of general education in which industrial arts takes its place.

1. Morrison, Henry. *op. cit.* Chapter I.
2. Bonser, Frederick. *The Elementary School Curriculum.* The Macmillan Co. P. 76.
3. Bonser, Frederick. *op. cit.*
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Adolescent Development

(Continued from page 246)

found in the unorganized out-of-school activities in which every person engages. The variety and diversity of such enterprises are too numerous for even a condensed listing. They range from the repair of a scooter wheel to the painting of a house, and from making a collection of different kinds of woods to the reading of *Popular Science.* Such contacts have a direct bearing upon the industrial information and experience of the student. Instructors should stimulate and encourage these activities in every possible manner. One of the most interesting by-products of these outside contacts is the establishment of a home workshop. The work accomplished there, if it is really to appeal, must be closely related to the things which students like to do in their out-of-school time. They certainly do not care to build more necktie racks or more book racks. If on the other hand, they are encouraged to develop their projects around such natural activities as hunting, fishing, model making, radio, camping, hiking, and scout work, there will be only a very few whose interests cannot be touched. Much may be accomplished within the school walls by a comprehensive industrial arts program, but the teacher who can encourage students to carry their interests into the home, the street, the farm, and the camp, has undoubtedly contributed much more toward the building of good citizenship than the classroom alone can accomplish.

The essentials of a vitalized program of industrial arts as outlined in this article point continually to the need for stimulating an optimum development of the individual; providing ample opportunity for social co-operation and development, and above all, allowing increasingly for the use of intelligence in the solving of both individual and group problems that will help clarify the complexities of living in an industrial democracy.

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The Secondary School

By GEORGE C. DONSON

OUR public school system has had an interesting growth. It has advanced from the "three r's" to the program we enjoy today. It is of special interest to notice as one reads educational history how the new subjects were added to the curriculum. Physiology, for instance, was added in the state of Pennsylvania in 1896 in order that the pupil might learn something about the structure of his body. As early as 1860 classes in shorthand were taught in the St. Louis school.

The term "over-crowded" curriculum was first mentioned in the nineties as it was thought that too many subjects were taught in the schools and that quality was sacrificed for quantity. After the new subjects were once added to the curriculum, they were seldom dropped but have been united with other subjects of study. Greek is still taught in a few high schools. The curriculum may be top-heavy and wabbling but one may go to school in this country to learn most anything he desires. In all the additions and changes in the curriculums no subject has caused so many changes in our methods of teaching as has industrial arts. In fact many of the methods and techniques referred to as "progressive methods" in our current educational literature were first accepted and practiced by the industrial arts teachers. The very roots of such concepts as "individual needs," "individualized instruction," "socialized recitation" had their beginnings in the activity program as provided in the industrial arts shops. The introduction of shop work exploded the monastic idea that all learning must take place in the school room and from the printed page and probably helped to create a slogan of modern education, "Never learn anything from a book that you can learn in any other way." Without appearing over-enthusiastic it might be stated that our excellent science courses and our well-equipped laboratories, as we have in our high schools today had their inception after the introduction of industrial arts.

Frederick G. Bonser, of Columbia University, was the first to state that industrial arts is a part of general education and his definition of industrial arts is "Industrial Arts is a study of the changes made by man in the forms of material to increase their values and of the problems of life related to these changes." This is a modern interpretation of the aims of general education.

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The Secondary School Manual for Pennsylvania, Bulletin No. 241, gives the following definition of a Secondary School: "The term 'Secondary School' has recently come into almost universal use as a substitute for the term 'high school,' except for the designation of a particular school." For our purposes then, the secondary school may mean grades seven to twelve, or grades nine to twelve, inclusive. The industrial arts curriculum in the secondary school has been the subject of many spirited discussions. It is argued by some that the curriculum should be based on the industries of the community while others contend that it should be based on the theory that what is good for one community is also good for another. In view of the fact that the industrial arts work is non-vocational and that skill is not an immediate aim, it might be wise to conclude that the curriculum should be based upon the general principles of education which are found in the academic studies.

The United States Census of 1930 gives the following percentage distribution of the gainfully employed persons as follows: Agriculture Forestry and Fishing, 21.9 per cent; Extraction of Minerals, 2.0 per cent; Manufacturing, 28.9 per cent; Transportation and Communication, 7.9 per cent; Trade, 12.3 per cent; Public Service, 1.8 per cent; Professional Service, 6.7 per cent; Domestic Service, 10.1 per cent; Clerical, 8.2 per cent.

The following trades are listed where the individual earns his living by the use of his hands: bakers, blacksmiths, brick and stone masons and tile setters, carpenters, compositors, linotyper and typesetters, electricians, engineers, crane men and

hoist men, machinists, millwrights and tool makers, molders, founders and casters, painters, glaziers, varnishers, enamelers, plasterers and cement finishers, plumbers, gas and steam fitters and tailors. There is also a number of operatives in chemical and allied industries, cigar and tobacco factories, clay glass and stone industries, iron and steel machinery and vehicle industries, automobile factories, leather industries, shoe factories, lumber and furniture industries, paper and printing industries, cotton mills, silk mills, woolen and worsted mills and electric machinery and supply factories. The above are given to show how important it is that there should be a course in the secondary school to give training in the use of the hands since it is to be a valuable asset in later years to so many individuals.

A survey of the curriculum shows that woodworking is in the first rank as a shop activity. Woodworking is a time-honored activity. It has been the least affected by the prod of constructive thinking and is the most common medium of expression in the school shop. Lumber is comparatively inexpensive and is readily available to the most remote school. It is easily brought to the desired shape and if the project or piece of wood is spoiled, or if the student is not satisfied with his work and would like to start over again, there is not much loss. Furthermore, the student should work with projects he is able to make in the early years to keep him from getting discouraged.

The reason that woodworking has been so popular in the shop curriculum is that the equipment is cheap and now small machinery for woodworking is made possible by a number of manufacturers. Then, too, there are so many fundamentals in the woodworking course that they are carried over to the other shop courses. There is satisfaction in knowing about woods and many volumes have been written on cabinet making, pattern making, carpentry, furniture making and veneering. Any student who carries through a furniture project may find himself in an ideal condition to investigate suitable woods, glues, fillers, varnishes, paint brushes and he would add much to his education if he could go to some of the testing laboratories to see how tests are made. He might become interested in building a model house and then he would be able to see the need of mechanical drawing. He might have occasion to confer with the art teacher about his design and with the teacher of home economics about house furnishings. With the unlimited possibilities of woodwork it is sure to be the core of the curriculum for many years to come.

The Report of the Regent's Inquiry does not speak so well of woodworking. "The courses in industrial arts, which are intended to form a part of the high school program of general education, provide for the developments of certain avocational interests and skills (principally in woodworking) but are rarely comprehensive enough, or with sufficient basic processes to add much to the pupil's understanding of industrial occupations in general." Very few high schools have a course in wood turning but this is given as a part of the general woodworking course. Wood turning is called the awakening course, for if a boy has lost interest and wants to quit school, the chances are that he will remain in school if he can use the wood-turning lathe for a period each day.

The aristocrat of the metalworking trades is the machinist and in many of our high schools a course in machine shop practice is established. The cost of equipment is greater than for woodworking and the instruction is of a highly technical character. Now with the introduction of small machinery for metalworking and greater interest in the metalworking trades one may expect to find more such courses in the future. There is evidence that too much has been spent for machine tool equipment that is not vital for instructional purposes but the conclusion that school shops do not need to parallel industrial situations has simplified the teacher's problem so that he may feel free to recommend school shop equipment based strictly on school shop needs. Since so many of our people earn their living in the automotive industry, in the manufacturing of farm machinery and household appliances and in the work of transportation and communication where a knowledge of machinery plays a vital part it is possible that in the future this type of instruction will receive greater emphasis.

The graphic arts with emphasis on typesetting and presswork are taught in many of our secondary schools as a part of the industrial arts program. On account of the cost of equipment much attention is given to paper making, bookbinding, ink manufacture, printing by silk screen and planographic methods, block printing and the like. Pu-

pils may become interested in wallpaper designs, floor coverings and the printing of designs in garments and tapestry. A knowledge of how books and newspapers are printed would certainly be of interest to pupils in the secondary school. The great problem in the introduction of the graphic arts is to secure a competent teacher and one who meets the approval of the local printers' union. In some schools there is much production work. Orders stack up, ten thousand copies from this, and twenty-five thousand copies from that, consume the greater part of the class period and it is difficult to say whether this is the best method for teaching printing or whether it is better than none.

Auto mechanics, once considered a valuable course, is seldom found in the high schools today. Automobile makers have so improved their cars that little repairing is needed and when it is needed special tools and equipment are necessary, and in view of this, patching tubes, changing oil and polishing can hardly be justified as a course in education.

The industrial arts course should be planned as an integral part of the high school program. If the course is outlined with learning difficulties and attainment levels as a major part, then one might say that it should be rated in the program of studies as mathematics or English and the credit toward graduation should be in proportion to the time allotment. At present the unit shop is more desirable for handling the larger classes, while the general shops are suitable for sixteen or less. This conclusion is reached after teaching twenty years in a general shop. The size of the industrial arts class depends upon the floor space, the lighting and the work stations and a shop should never have more students than work stations and while the discipline of the shop may differ somewhat from the other courses of instruction, if the class is conducted as a class, loafing will be discouraged. In the N. E. A. Bulletin for November, 1939, "The Teacher Looks at Teacher Load," table number nine gives this information on the teacher load in the technical arts. Of the one hundred and six cases reported 1.2 per cent said that their load was light, 42.5 per cent said that it was reasonable, 7 per cent said that the load was extremely heavy, and 39.6 per cent of shop teachers called attention to the load of maintaining and repairing equipment. In some school systems the course in industrial arts is compulsory and in others it is elective. The reports from a number of schools show that the work is compulsory. The time allotment is from two to five periods per week and in schools where there is an industrial arts for all four years of the high school, the time allotment is 400 hours. It is difficult to estimate the value of any high school course. What may appear of value to one is of no value to another and it is suggested that the best time to judge the value of any subject taught is after fifty years of practice. Yet a few contend that the best criterion of a course of study is the report from the number of students who come back to tell their instructors how much this course or that has helped them in their life work and in their living. If we could depend on this criterion it might be a repetition of the old story of the ten lepers who were healed and only one had time to come back to thank his healer.

Before coming to any conclusions one should consider the changes that have taken place since industrial arts was introduced and since it became a part of the curriculum. The industrial arts program contributes to the education of the whole child. The use of instruction sheets and working plans, puts upon the pupil the challenge to solve his own problems in a way that no other subject in the curriculum could possibly do. The searchlight is now focused on the educational program in general and the question is asked, "Come, now, who will show any good?" There are a few questions that should be considered in speaking of values of the industrial arts program and they might be the subject of future research studies.

What is the scope of the information level and what should the industrial arts student know after 36 hours, 72 hours, or 400 hours in the school shops? Will he know the tools with which he works and in addition some of the tools used in industry and the meaning of mass production and the labor problem?

In what way does the industrial arts course help the student to become an intelligent consumer and to know the value of materials and the finished product? Just how important is a knowledge of the Diesel engine if one has no use for it except as a means of transportation? Does the completion of a project in the woodshop create self-confidence any better than solving a problem in algebra?

(Concluded on page 256)

Adult Education

By BURL NEFF OSBURN

THE arts of construction have long been utilized by schools and other social agencies in some form of adult education. Most of the work in this field has been developed out of certain definite needs. Problems arising from adult experiences have presented a genuine learning situation calling for solution. The range and variety of these adult problems are beyond the scope of this brief discussion, but a few examples can be described. The areas of activity may be classed as the preservation of the arts, the securing and maintaining of health, and the attempts to attain economic security. These are not discrete topics, but rather overlapping classifications, one of which may dominate a given activity while others are also sought.

The impact of the machine resulted in profound changes in the ways by which adults worked to maintain themselves and their dependents. Many of the pre-industrial revolution arts, such as weaving or working in metals, have been almost entirely forced out of the home as arts and into the factory as routine mechanical production.

The museum may be credited with having performed a type of adult education in these arts by preserving and displaying the objects produced by almost-forgotten techniques. This simple function has, in more recent years, been only one of many educational methods employed by the museum. Collections of early tools have been made and these classified and their uses studied. Traveling collections have carried the museum's influence to schools and other agencies beyond its former range of patrons. In some cases, craftsmen are shown illustrating early methods of work. The work of historic and contemporary craftsmen is shown, while lectures and studio and shop classes are held in many museums.

A great amount of research and publication in the historic aspects of early arts has been carried on. Perhaps the most important example of such research is being done by the Federal Art Project in the *Index of American Design,* which seeks to compile a record of objects of historic significance and to gather a body of traditional material which may form the basis for a development of American design.

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The WPA has done much to educate the public in the early arts. Although the primary purpose has been to provide a form of employment, many early arts have been revived and developed through subsidizing the workers. As an example, old looms have been restored to working condition and early pattern drafts copied and produced. Native-grown flax has been prepared, spun, and woven into linen. Basketry, leather work, wood carving, needlework, pottery making, iron and pewter making have been taught according to the various regional traditions.

Early Indian arts have been revived through the aid of the Indian Arts and Crafts Board by means of expert instruction, research in the growing and preparation of abandoned materials, and marketing aids. The Board is empowered to assign a mark of certification for work that is done by early methods and is of authentic design and material.

The vast work done by school and service agencies in the southern Appalachian region is based partly upon the revival and development of early arts. The same may be said of the state-aid work in New Mexico, New Hampshire, and Vermont, where economic aid is being given through instruction in early handicraft techniques.

Folk festivals and exhibits do much to educate the adult in the early arts and to preserve active participation in them. The national folk festivals and the Department of Agriculture have held important exhibits.

There is no thought that these early arts may again be of any great economic significance. Rather, it should be said that their revival has opened fields of interest and absorbing work to thousands of adults. Perhaps more significantly it has brought to many persons the conception that

the production of the things of common daily use may be carried on in a satisfying, educative way in place of the routine, unresponsive method of the machine.

Occupational therapy for persons with some definite physical or mental impairment has come, since the World War, to be recognized as an important technique of cure or amelioration. It is regarded as a medical treatment of organized work prescribed by the physician according to the needs of the patient.

An absorbing occupation tends to stimulate ambition and improve morale, which may hasten mental and physical recovery. The emotionally unstable individual may be aided thereby in establishing good habits which facilitate other treatment.

Corrective institutions find handwork to be a valuable therapeutic device, which facilitates desirable personality changes. Depressed and intractable patients sometimes develop interests which radically improve attitudes and hasten recovery.

Handwork is often taught in the treatment of surgical cases to give needed exercise to affected parts. Trained occupational therapists work at the bedside, in homes or hospitals, or may direct the work of ambulant patients in special workshops. Special forms of work are developed for tubercular patients, cardiacs, mental cases, those with functional impairment, or with other ailments. There is reason to believe that the tectonic arts are finding increasing use in the hands of skilled therapists, and that further research and study will add to their use.

"Recreation" is commonly regarded as the use of leisure time, leading to the re-creation of mental and physical qualities. The use of the planned program of recreation seems to accompany closely the rising tide of industrial expansion and the growth of cities during the past forty years.

A dichotomy of work and leisure, vocation and avocation, has come about which regards work as inevitably monotonous, repetitive, and exhausting, while leisure is thought to be the opportunity for interesting, creative, and pleasing effort. Unfortunate as it may be, the work of a large proportion of the population is characterized by an increasing use of the machine, which embodies qualities such as precision and constancy that have increasingly replaced the intelligence and skill of the hand worker. One might wish that the machine could be used for the relief of drudgery, while work could be educative and stimulating. Commercial control of the means of production makes a continuation of this division of work and recreation almost inevitable. Unless the direction of industrial production for social good comes to prevail, most workers will always find it necessary to seek some form of non-pay roll activity if creative work is desired.

Some form of work in the arts offers to many persons an opportunity for the utilization of full powers no longer demanded by the daily job. There is no thought that this activity can compensate for uneducative hours of work, but as a form of therapy it may restore a degree of balance by giving opportunity for the use of intelligence in study, skilled performance, and reasoned activity, all done with interest and enthusiasm. While nothing can make up for lost hours, these arts expressions or activities offer the means of providing focal points for the development of interests otherwise lacking.

A large share of the work in the arts offered to adults by the public schools seems to arise from the desire of these persons to pursue some interest under guidance, with suitable physical facilities which they can not provide for themselves. Anyone who has observed the intense eargerness with which adults of all ages follow some constructive art must realize the value of offering these opportunities. Private schools, art workshops, social settlements, corrective institutions, the Agricultural Extension Service, churches, missions, the CCC, and the WPA are some of the agencies engaged in providing work in the arts for recreational ends.

Handicraft techniques have been declining in importance as a source of economic goods for over a century. The older techniques are utilized, for the most part, by the handicapped or by distressed population groups whose economic balance has been destroyed by technological changes.

Social agencies offer education in handwork designed to provide some financial return to the deaf and hard-of-hearing, the blind, the chronically ill, the physically handicapped, the senile, and the incarcerated. In most cases the income from these sources is very small, and only supplementary to

other aid. In some instances, such as occupational therapy, earning may be incidental, and becomes in itself of therapeutic value.

Stranded occupational groups have been taught some types of handwork as a relief measure designed to alleviate the extremes of economic distress. Unemployed miners have been aided by Federal and private agencies in subsistence homestead projects, which depend partly upon limited agriculture and partly upon other forms of self-maintenance. Training has been given in building homes, constructing furniture, weaving material for clothing, and the production of wares for sale. Marginal land populations in a few states have been given aid by means of training provided through Smith-Hughes funds. This work has been successfully developed in the Southwest, the Appalachian region, and parts of New England. In some cases the planning of an economic future for these distressed groups is definitely based upon such an agriculture and handicraft combination. This is of interest since it represents a definite about-face from the usual plans for industrial expansion and the trend toward urbanization.

The Department of Agriculture, through its Extension Service, has actively encouraged the making of articles of handwork for sale, and especially for farm home use. Special agents give training in some form of work selected for a year's project, through demonstrations, leadership groups, class instruction, and visits to homes. Over a hundred thousand homes are reported as following the instructions of these agents in some form of handwork in a year.

With rare exceptions the income from the sale of goods produced by these groups is only a fraction of that offered by equivalent factory employment. However, in many cases the cash needed to supplement farming or other part-time employment may be earned through this means. Perhaps the chief economic aid for those who engage in the arts is the opportunity to provide for themselves needed articles for which cash is not available.

It may be seen from the above descriptions that more than one purpose may stimulate adult education in the arts. Whatever the aim, it is usually one identified with some major problem arising from adult experiences, and not one thought up by the educator to justify his efforts. It is further evident that there is no false and unnatural division in the arts here as so often exists in the secondary school. Problems are dealt with in any medium which seems appropriate without regard for conventional hierarchies of worth.

Briefly summarized, adult education in the arts may be said to provide: (1) Opportunities for study and experience in a field rich in possible areas of interest; (2) training in techniques which make possible an improved standard of living; (3) experiences in media and methods through which non-verbal ideas, ideals, and feelings may be expressed; (4) growth of appreciation of art activities and products; (5) work which may be practiced in harmony with democratic ideals; (6) social experimentation in forms of work against which present trends may be evaluated.

Secondary School

(Continued from page 253)

Are the chances of success better for the industrial arts student after he shares a bench, tools, whetstone and ideas with his fellow workmen? Will the safety practices which have been taught in the shops be carried over when the individual receives his driver's license? Do the shop courses tend to keep boys in school and away from the juvenile courts? Is there any culture in operating a machine whether it is costly or not? To what extent might it be said that the industrial arts course gives training in ethical and moral character? Is the course justified on the basis of avocational interests and what this may mean to the individual if he should attain a ripe old age?

Will the course serve as a try-out course to discover those who are capable of following industrial pursuits and to head in some other direction those who would not make a success in such pursuits?

With our better teacher preparation for the teaching of industrial arts, with the introduction of better shop equipment, with the recognition that industrial arts has received during the past forty years as a means of education, with the endorsement of industrial executives as to the advisability of such courses in the public schools, surely the industrial arts program will be a vital part of the secondary school program.

Are you using *Teaching as a Man's Job* in your guidance work?

Teacher Education

By JOHN R. LUDINGTON

SOCIAL-ECONOMIC conditions are forcing public schools, colleges, and universities to examine critically their underlying purposes, methods, and personnel. That these conditions will affect programs of teacher education is inevitable. Traditional practices are being challenged, and all areas of education are being made aware of the values of continuous study and evaluation. Teacher-education programs are now being surveyed by numerous organized professional groups and agencies. Persons engaged in industrial arts teacher-education and industrial arts teachers, as well as those in other areas, welcome and encourage such critical self-analysis. Recent surveys and studies have revealed many important trends which are of value to persons interested in the education of teachers of industrial arts.

The importance of continuous in-service teacher education is recognized by the writer. Many values to teachers inhere in the current curriculum-improvement activities and programs. The professional value of attendance at conventions, association meetings, and various other teachers' group conferences must not be discounted. Community activities, discussion groups, and forums are essential to the continued growth and competence of teachers in the development and maintenance of the ability to cope adequately with prevailing social-economic problems. The industrial nature of much of our contemporary life makes it imperative that the industrial arts teacher maintain close relationships with community resources and agencies.

Some reasons for the increased emphasis and attention now given to teacher education have their origin in the rapidity of social-economic change. Technological advancement in the fields of science and individual enterprise have rendered obsolete our former methods of communication, transportation, production, housing, and government regulation—to mention only a few areas of human relationships. Industrial societies are more complex, and life is more interdependent. Social philosophies become more than patterns of government or ways of voting. Business enterprise is forced to recognize its responsibility to society and abandon those selfish and material values of the *laissez faire* pattern. Teachers have realized that school programs which are not socially oriented were not educational in the sense of helping learners become more intelligently self-directive.

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These factors have directly or indirectly affected most public elementary and secondary schools. In many cases individual schools have undertaken curriculum improvement programs and school reorganization. The intensity of curriculum improvement and the increased recognition of the place of the individual teacher have caused teachers colleges to modify their offerings so as to provide greater recognition of the importance of individual personality in the general scheme of things.

Two general trends well describe the changed point of departure in teacher education. First, the recognition of democratic values and processes; second, the educational nature of experience, the learning process, and a better understanding of behavior characteristics.

According to H. R. Douglas *(Secondary Education for Youth in Modern America)*, "It is a fact that teachers do much less practical thinking . . . than is desirable. They assume the validity of what they are given to teach, and textbooks in turn are developed to fit the teachers now in service. Courses in 'education' are disproportionately devoted to the technique of teaching what is to be taught. Knowledge of a philosophy of education, training in the consideration of the objectives of education and its place in a democratic society, and an understanding of the society of which the teacher is preparing citizens, are conspicuously lacking."

If the social purpose of education is to educate for the continuous reconstruction of experience

through democratic processes as well as to educate for the necessary adjustments in a period of constantly and continued accelerating change, teachers must see to it that the organized life of the school embodies democratic ideals and gives practice in realizing them. All teachers must have an understanding of pupil behavior and those experiences which will most efficiently develop behavior characteristics demanded by the democratic ideal.

This calls for a program of teacher education which places major emphasis upon the development of teacher personality. Studies show that the chief causes of weakness or failure among poor teachers were inadequate or undesirable personality characteristics. The day seems to be rapidly passing when anyone can teach school. Ruth Strang, in her book, *The Role of the Teacher in Personnel Work,* maintains that "the personality of the teacher is the factor which largely determines success or failure. . . . Techniques and knowledge alone are not a substitute for a personality which has been achieved by living simply, honestly, and courageously. It is through contact with personalities of that kind that students become truly educated."

Greater care is now being taken in the initial selection of prospective teachers through various guidance and personnel procedures. The trend toward general orientation courses organized by colleges of education and departments of industrial arts which come early in the freshman year are indications of this selective tendency.

All teachers must increasingly become students of child behavior and the learning process. Teachers must be capable of discovering interests, abilities, perplexities, and needs of students through continuous study and diagnosis of successes and failures, emotional strengths and weaknesses, ambitions, attitudes, characteristic modes of behavior, home environments, and other items of information. In other words, he must come to understand the personality development of himself as well as his students and to make this understanding effective in reconstructing the educational scheme in which he works.

Persons who are not vitally and genuinely interested in human nature and who are not sincerely desirous of helping others will seldom if ever develop into good teachers on any educational level in any area. The teacher in the modern school is called upon to take the student as he is and to select by means of cooperative planning those experiences which the pupil in question needs for his maximal development.

The greater the number, variety, and depth of the prospective teacher's real life experiences, the greater are his probabilities for usefulness in the schools. Broad, general contacts with things industrial prior to specialization are to be desired over limited experience in a given field.

The industrial arts teacher of today must have a breadth of scholarship not previously required. In the past industrial arts teachers, as well as those in other areas, have dealt largely with narrowly defined techniques, skills, and information, logically organized in terms of vocational demands or trade analyses. With the broadened conception of education, increased emphasis is placed upon problems of living by individuals and groups of individuals.

This broadened outlook has done much to cause teachers to abandon the point of view which has prevailed for so long in drawing, woodworking, metalworking, and printing courses, where skills have been viewed as ends rather than as means. Such courses were organized as disciplines by craftsmen rather than by students of personality growth primarily concerned with providing experiences which would lead to maximal individual development and better understanding of social forces in our industrial economy.

Indeed, so expansive a breadth of scholarship is now required of teachers to meet adequately the needs of a given group of students that teachers representing several fields of instruction commonly pool their resources in correlated or fused courses. The fact that subject matter is rapidly coming to be regarded as a means to the end of more abundant living for the pupil, rather than an end in itself places a burden on the shoulders of the prospective teacher which his predecessors of a decade ago were not obliged to assume.

Industrial arts teacher education has until recently tended to follow the concepts of the teacher as a master technician who transmits "fundamental knowledges and skills to immature pupils." Professionally, teacher education has emphasized methods or tricks of teaching. So far as subject matter is concerned, teacher education programs

have emphasized review of the traditional elementary- and secondary-school activities or courses similar to those of the arts college and university. It is now realized that such curricula have not recognized the principles of freedom and individual thinking so essential in all real learning.

Teachers should be thought of as guides to personality development with emphasis upon thinking and cooperative participation rather than as teachers of isolated skills, techniques, and "related information."

Recent surveys show that only a few industrial arts teacher-education programs are making use of problems of living or community resources. Course analyses do not reveal any attempt to orient prospective teachers to the ramifications of such problems as unemployment, labor relations, industrial propaganda devices, price setting, distribution costs, housing, government regulation of industry, working conditions, the program of private enterprise, wages and hours, etc., in spite of the fact that the stated purpose of many industrial arts programs is to help people become intelligent with respect to the problems of living in an industrial society. Studies of simple industrial tools and processes continue to predominate merely because boys like to manipulate and make things.

When professional aspects of industrial arts teacher-education programs are compared with those of other areas, the traditional emphasis upon manipulative techniques and skills is made apparent as a carry-over from the days when teachers were recruited from the ranks of industry.

Some college programs have tended to place undue emphasis upon "shop" courses and to minimize the learning values of other experiences in shaping personality growth. These programs were "justified" through a rationalization of their values as formal disciplines. Because of conscious or unconscious adherence to these values many programs became highly formalized and standardized. Instructors were task-masters and final sources of authority rather than leaders or guides.

Evidence indicates that teachers "trained" in such programs merely perpetuate the established patterns and conduct junior and senior high school pupils through a similar sequence of experiences. The same "projects" were made and "related work" became a matter of teacher dictation and requirement. Teacher and student originality, initiative, and creativeness were thus stifled in the effort to perpetuate narrowly conceived "trade tricks" and to "cover the course."

The teacher is now charged with the responsibility for helping his pupils see their present attitudes, beliefs, and conduct in a wider social context, to face social issues in a spirit of calm deliberation, to deal critically and honestly with controversial questions. To accomplish this the teacher must have achieved with clarity and understanding a reasoned personal and social philosophy.

Industrial arts teacher-education programs must therefore consider the totality of the prospective teacher's program. Insights must be developed in such a way as to bring about an integral and consistent understanding of conflicting social forces. Relationships involving private enterprise and government, industry and labor, production and consumption, distribution and price regulation, and various philosophies advocated for social control which affect all areas of living must receive more functional consideration in Industrial Arts Education.

The prospective educator early in his career should be helped to discover what education should be and is becoming as well as its present status. This orientation will make for more careful selection of areas of major interest in planning subsequent college experiences. Industrial arts people are now encouraged to select areas which go together in terms of their interests, abilities, and past experience. Such areas as the social studies, the physical sciences, and art are becoming increasingly more popular as a result of the trend toward unified or core studies in which industrial problems of living are a major part.

Because of the recognition of democratic processes involving cooperative participation, undergraduate programs now incorporate opportunities for teacher-pupil planning and group undertakings. This trend stands out in contrast to the highly individualized experiences of the past.

The most important essential in modern industrial arts programs for teachers is the period of active interneship in which the prospective teacher is given an opportunity to participate in a teaching-learning situation from the standpoint of a teacher. At least one institution has developed facilities whereby field service experiences may be engaged

(Concluded on page 263)

Curriculum Development

By W. E. CLARK

WE HAVE been hearing about progressive education for about ten years. We can see some evidence of change—let us hope this change is progress—but in a world which is changing so rapidly that we hardly dare take time for a night's rest if we would keep up with the changes, we find people doing many things in out-of-date styles, or using methods which are long since obsolete. In too many classrooms and particularly in industrial arts shops we can find proof of actual resistance to progress.

Not so long ago we called the shop activity, which consisted primarily of woodwork, manual training; then we adopted the name manual arts. Now we call the shop program industrial arts. Recently I have had the opportunity to visit a few of the shops of some of our Nebraska schools. In most of these shops there is a good program of industrial arts, however, in some of our shops the instructor claims the name of industrial arts but is teaching a fairly good manual training class. He seems to think that simply by changing the name of the course without changing any of the content he automatically has a good industrial arts class.

Industrial arts means more than a new name. It means a new philosophy—a new set of objectives. Many shop teachers have adopted this newer, more progressive viewpoint of shop activity and have gradually changed the content of their courses to meet all of the objectives of industrial arts but are still being referred to as the manual training teacher.

There seems to be some difference of opinion as to just what constitutes industrial arts. If industrial arts is to gain the place which it rightly deserves in the whole educative process, we must, at conventions and conferences, define and redefine our philosophy, our objectives until we will all stick together on what we mean by a well-rounded and thorough-going program of industrial arts and industrial education.

The Nebraska Industrial Arts Teachers Association has adopted these twelve objectives or general outcomes to be obtained in a good industrial arts program:

1. To develop in each pupil an active interest in industry and in industrial life, including the methods of production and distribution.
2. To develop in each pupil the ability to select wisely, care for, and use properly the things he buys or uses.
3. To develop in each pupil an appreciation of good workmanship and good design.
4. To develop in each pupil an attitude of pride or interest in his ability to do useful things.
5. To develop in each pupil a feeling of self-reliance and confidence in his ability to deal with people and to care for himself in an unusual or unfamiliar situation.
6. To develop in each pupil the habit of an orderly method of procedure in the performance of any task.
7. To develop in each pupil the habit of self-discipline which requires one to do a thing when it should be done, whether it is a pleasant task or not.
8. To develop in each pupil the habit of careful, thoughtful work without loitering or wasting time. (industry)
9. To develop in each pupil an attitude of readiness to assist others when they need help, and to join in group undertakings. (cooperation)
10. To develop in each pupil a thoughtful attitude in the matter of making things easy and pleasant for others.
11. To develop in each pupil a knowledge and understanding of mechanical drawing, the interpretation of the conventions in drawings and working diagrams, and the ability to express ideas by means of a drawing.
12. To develop in each pupil elementary skills in the use of the more common tools and machines in modifying and handling materials, and an understanding of some of the more common construction problems.

I think the eleventh is a bit too specific and should be broadened to include all forms of graphic interpretations. I also feel that we should add one to keep us constantly aware of the ever-increasing amount of leisure time. The workers coming under the Fair Labor Standards Act have been given an additional two to four hours of

★ *W. E. Clark is Coordinator of Trade and Industrial Education, Kearney, Nebraska, Public Schools. He is a member of Phi Delta Kappa.*

leisure per week. We, as shop teachers, should, therefore, make definite plans for encouraging our students to form the habit of using some of their leisure in some kind of creative activity.

We have reached a place in our social and economic development where some of the roads to wealth are closed. Our natural frontiers are gone. We have not developed any new industry which is absorbing large numbers and affording a new means to wealth. We are rapidly nearing the place where the laws will protect the less fortunate from illicit get-rich-quick schemes. But we do have our leisure which, I believe, can be a wonderful source of wealth—a different kind of wealth perhaps—but wealth nevertheless. I believe it is the school's responsibility to do all that it possibly can to improve this new road to wealth.

Industrial arts has three definite jobs to do and I believe it can do them better than any other subject:

1. As has been pointed out, it should provide exploratory experiences in materials, in jobs, and in human relations. This is guidance, educational, vocational, and emotional, all three.
2. As a result of the exploratory experiences every student will be able to decide, on a basis of first-hand experience, definitely that he is interested in certain of the trades represented in the program, or that he is not interested in any of them.
3. If the program is successful it will have provided each student with sufficient training in one or two of the crafts to enable him to enjoy a home workshop as a means of using some of his leisure time.

Assuming that these objectives are acceptable, the next question is, are they attainable? If so, how? If these or any other objectives are to be reached there is only one method to use, that of painstaking, careful planning on the part of the instructor. The objectives have pointed out the destination, they have defined our job, they are the working drawing. Now with the job defined and the working drawing supplied the next step is to plan the procedure of getting the job done.

In most of our schools, we have at least a woodwork shop with the more important tools and equipment for making projects of wood. Now in order to meet the objectives more effectively, we must provide a wider range of exploratory experiences as well as bringing the student in contact with a broader range of the common materials. The student needs, in order to have any basis for choosing an occupation, to see experienced people working with the materials as well as to try his own hand at some of the common processes involved in changing the raw materials into the finished products.

There is always considerable discussion, even heated arguments, when the question of what to add to our present list of offerings to make our industrial arts program more effective, is raised. This problem, like any other problem, needs a practical, impartial, impersonal solution. We must put aside our own set likes and dislikes and attack the problem in the light of the facts pertinent to the particular situation in which we find ourselves.

The problem, it seems to me, when we are considering the development of a more adequate industrial arts program is, what constitutes an adequate industrial arts program for the average American town? Taking the broadest interpretation of industrial arts and the average secondary school, we see at the outset that among other facts that we are planning for students with a wide range of interests and abilities, as well as for students ranging in age from about 12 to 18 years. The cost of the course to the individual student must not be a limiting factor. The experiences and materials must not be entirely foreign to the local community. The processes must not be so difficult that they discourage, yet, they must be of such a nature as to challenge the interest and ability of the learner. From these observations it would seem to follow that the next step in our plan of procedure is to set up a list of criteria for determining what kinds of experiences and materials should be included in the program.

Once the criteria are established, the next step would be to carefully screen from the mass of processes and materials found in our ever-changing work-a-day world, those materials and processes which will contribute to the achieving of our objectives.

We now come to the task of piecing together the content and materials into an educative experience which will take the student from where he is now to where we want him to be at the conclusion of our course. We must decide upon the offerings for the different grade levels.

Next we must take some students over this educative journey and after the prescribed stopovers, detours, and side trips check up to see if we have

accomplished that which we set out to do. If we have, fine; then we must keep our program up-to-date, keep it adjusted to the pace set by industry and science. If we have not reached one goal then we must not despair, but try again, there must be a way. Only perseverance and patience will find that way.

Since there are well over 20,000 different occupations in the United States it is obvious that we cannot possibly provide exploratory experiences in a very wide range of them. However, in the average small community one will observe that the common service occupations, the building trades and agriculture represent the principal source of employment. So, if the industrial arts content is drawn from these with special adjustments for the unusual cases we will not be far wrong. And, too, there are certain fundamentals which are more or less common to all occupations mentioned above. For example, while it is not necessary for all trades people to be able to execute a drawing that meets all of the standards of a master draftsman, it is necessary for most of our trades people to be able to interpret and follow the directions of the more common forms of graphic presentation.

Certain materials, processes, and occupations present themselves more favorably than others to the particular age group in question. Some activities can be carried on with considerably less expense than others. Some require more time to present than others.

Taking these and other pertinent factors into consideration, let us set up a hypothetical program and examine some of its merits and faults. Let us say, for the particular community in question, that materials, tools, and processes from the following occupations survived the sifting of our screening process: auto mechanics, cement work, plumbing, electrical repair work, sheet metal work, carpentry, cabinet making, art metal work, and graphic presentations.

We have nine activities and with thirty-six weeks of school that figures four weeks to each. Starting in the seventh grade these four weeks in each field should be an orientation period. Each student should be required to do a prescribed list of jobs. There should be planned trips to downtown shops. Everything that is done should contribute toward the satisfying of some of the objective and the student should understand the real purpose of the job at hand. By the time a student reaches the end of one school year of this orientation process he will have developed some likes and some dislikes which will be very helpful from the standpoint of vocational guidance.

At registration time, the teacher and student will select seven of the nine activities for further study in the eighth grade. With a slight increase in the amount of time for each activity, with the two which were least interesting to the student eliminated and with one more year of maturity the student should make more rapid progress than during his first year. Again at registration time the student will eliminate two of the least interesting activities leaving five for the ninth grade with a corresponding increase in time for each.

Upon reaching the eleventh grade the student will have eliminated eight of the fields of occupational interests and will have spent approximately twenty-eight weeks in the field which has proven to be most interesting to him. He will be able to decide upon a basis of first-hand information whether he would like to follow that particular occupation as a life work or not. At least he will be nearer ready to decide upon his occupational interest than if he arrives at the eleventh grade with no previous shop experience or with one or two shop activities "oversold" to him.

If he decides to enter this occupation and there is a program of diverse occupations in operation in the school, in all probability the coordinator will be able to place the student on a part-time job in the occupation and have two years of his high school time in which to give him specialized training and to supervise his training on the job.

If he decides not to enter the occupation he will have had at least enough experience in the field of work to enable him to enjoy it as a leisure-time activity. In either case he will have arrived at the threshold of his junior year thoroughly imbued with the idea that people work for a living in this world of ours and regardless of his further occupational interests he will realize the necessity of careful preparation. He will, I believe, understand that in order to be a wise consumer that he must also be a successful producer. He will recognize the dignity of labor.

Taking a specific case to illustrate the plan. Let us assume that John enters the program along with several other boys. During the first year he

finds art metal and carpentry least interesting of the fields studied. During the second year his instructor notices a strong tendency toward the mechanical trades. At the end of the year he eliminates cabinet making and cement work leaving electrical repair work, sheet metal work, plumbing, graphic presentations and auto mechanics to be studied during the ninth grade. This year John becomes very much interested in auto mechanics and his interest in drawing and in sheet metal falls off. John's father is a building contractor and wants him to continue his study of plumbing and electrical repair work, hoping that his son would become interested in some phase of building or contracting. But the auto mechanic work held the strongest appeal for John.

Upon entering the eleventh grade, John makes application to the co-ordinator of trades and industrial education for a part-time job in one of the local garages. A training station is found and he continues to study auto mechanics but from a different viewpoint. In the shop he learns to do the various repair jobs and in school he studies the technical information of his job, learning the time-saving procedures which enable him to do a better job in a shorter time. He also learns the importance of a real pride in his job as well as the ability to get along with his fellow workmen and his employer.

At the end of his senior year he graduates along with his class. He is also nicely started on the road to becoming a successful auto mechanic. John has learned one other very important fact. He has found that the mechanics in his town who are holding the best jobs keep up-to-date by continuing to study the manufacturers' literature as well as by taking an active part in the service meetings.

In a couple of years John will be referred to as another home town boy who made good. Fred, Jim, Joe, and Henry who started with John in the seventh grade found different occupations of interest and upon graduating were started on their way toward becoming valuable citizens in their own community.

Naturally we cannot provide an industrial arts program that will help all of the students get their start toward a life work but by co-operating with all of the other departments of school, each doing its part to point students toward useful citizenship, the industrial arts department will receive its just reward for a job well done.

Teacher Education

(Continued from page 259)

in by students as early as the end of the freshman year. In addition to providing opportunities for self-exploration these experiences provide a point of departure for later professional and content courses. Obviously it is essential for the prospective teacher as early as possible to habituate himself to the difficult and never-ending task of keeping up with the times as a leader of democratic processes. This is especially important for industrial arts people if they are to contribute to an understanding of contemporary industrial problems. Invention and technology are constantly making new demands upon his program, procedures, library materials, and physical equipment as well as the physical setting which houses his area. Because of the rapidity of industrial advancement, teacher-education centers should be planned with a maximum of flexibility and adaptability. New industrial tools, machines, materials, processes, and problems spring up almost overnight.

Teachers in service are now looking to the teacher-education programs as demonstration and experimental centers. Persons engaged in teacher education are devoting more and more time to field work of the type traditionally allocated to supervisors and state directors.

In some instances state steering committees have been appointed to stimulate, coordinate, and develop public-school curriculum improvement programs. Experimental work conducted by the teacher education centers are valuable assets to such committees and contribute to the general improvement of the program.

To summarize, trends in industrial arts teacher education are characterized by: (1) increased acceptance of a responsibility for the consideration of social problems and the application of democratic values and processes to an industrial economy; (2) greater attention given to studies of the educational nature of experience, the learning process, and characteristics of pupil behavior; and (3) more attention paid to selection of prospective teachers, individual program planning, and personality development.

A Community Survey

By HOMER D. FETTY

IN JANUARY, 1939, the Board of Education of the City of Burbank, California, realizing the need of definite information regarding industrial opportunities in the community and the extent to which the schools were preparing the pupils to profit by these opportunities, began an inquiry to determine: (1) how industry felt about vocational training in schools; (2) what trades should be taught; (3) what the job opportunities in the community were, and (4) how to make the school program fit the needs best. The answers to these questions were obtained through a community survey.

Data were secured through personal interviews with leaders in the community, heads of industries, and representatives of organizations. A preliminary analysis indicated that there were 168 places of business in Burbank that could be classified as belonging to the trade and industrial field. They were divided into seven categories: (1) building, construction, and repair; (2) manufacturing and factory; (3) automobile; (4) aviation; (5) metal and machine; (6) motion picture; and (7) miscellaneous.

Superintendent Buel F. Enyeart made the original approach through a letter to the head of each enterprise introducing the interviewer, explaining the nature of his work and duties with the school system, the object of the interview, and requesting an appointment. This preliminary was of vital importance to the successful completion of the survey.

The next step was to devise a record form on which the data could be easily recorded and from which it could be readily compiled and interpreted.

The most gratifying part of the endeavor was the attitude of the business men of the community. With a very few exceptions, they put aside everything else to talk when the visit was made. Practically everyone was vitally interested in the school program. None refused any information asked for.

The final step was to compile results and interpret the findings. Space will permit only a brief summary and a mention of a few of the highlights.

★ *Homer D. Fetty is Director of Industrial Arts Education, the Burbank, California, Public Schools. He is a member of Phi Delta Kappa.*

However, a complete analysis of the survey is available for distribution upon request.

Ninety-eight per cent favored an expanding shop program in the schools.

One hundred per cent enthusiastically approved indentured apprenticeship. More than half were willing to employ apprentices.

Ninety-six per cent preferred employees who were trained in specific skills.

Eighty-two per cent would encourage their employees to attend trade extension classes if they were available. On the average they felt that two-thirds of their workers would be benefited.

Ninety-five per cent express their opinion that the modern high school did not meet the needs of the student who did not go on to college; neither did it meet the needs of industry.

Some immediate results of the survey are: (1) a general steering committee of 35 outstanding leaders in the community has been established; (2) trade advisory committees in all trades have been organized; (3) several apprenticeship committees are functioning; (4) more than 100 apprentices have been indentured; (5) two new school shop buildings are being built; (6) vocational shop courses have been started in the high school; (7) more than 2000 students have enrolled in trade extension classes; (8) tentative plans have been drawn for a vocational high school or technical institute to be built in the near future; (9) the Industrial Arts Program for the Burbank City Schools for 1939-40 has been expanded and adjusted to fit the needs of the community on the basis of the findings of this survey.

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Research

By VERNE C. FRYKLUND

★ *Verne C. Fryklund is Associate Professor of Vocational Education, Wayne University, and Supervisor of Vocational Education, Detroit, Michigan, Public Schools. He is a member of Phi Delta Kappa.*

As IN the happenings of the whole scheme of things in life, philosophy, practice and research in education seem to belong together. It is difficult to say what sequence should be followed. Events in life happen because people have ideas, beliefs, concepts about things, and they spring into being because people want them that way. Evaluation takes action almost simultaneously with practice because the people who initiate things also evaluate them and, too, there are those who spend their time evaluating the creations of others. Living goes on. There are ideas, beliefs, concepts of things; there are actions, and there are evaluations. Out of evaluations grow more ideas, beliefs, concepts, and more action. They influence each other. They represent thinking procedures and modes of action. Philosophy, practices, and research therefore belong together.

History shows that philosophy has led the way to intellectual liberation in all areas of human endeavor. Out of philosophy have grown achievements in physics, chemistry, anthropology, biology, psychology, sociology, and economics. The evaluation of outcomes in all areas of human endeavor, pointing to new formulations of action is a function of research. Research is a phase of scientific method and should point the way toward progress.

Philosophy, practices, and research in education have given industrial arts a place among the desirable educational experiences of youth. Industrial arts as an educational experience is progressive in nature. In its modern conception two important principles of the progressive movement are recognized: (1) education must be creative—it must be world-like; and, (2) education must provide for release of the self-learning and creating urge—there must be pupil participation in planning, doing, and evaluating. The instructional materials are obtained by means of an exceedingly important instrument of curriculum research in industrial education known as activity analysis. By means of this technique the activity in the world outside of school is studied and inventoried for instructional purposes. It is based on the principle that in all creative work in the world there are problems to be solved and human difficulties to overcome in the process of creation, and that there are essential elements, peculiar to the activity, that are necessary in proper combination to solve the problems. It is by means of the analysis technique that research is carried on to discover the essential elements and typical problems of the day for inclusion in the industrial arts offerings of the schools. The problem may be abstract as in pure mathematics, or concrete as in shop projects. In the planning function mentioned under point two above, the materials obtained by analysis are brought into use.

In this issue of THE PHI DELTA KAPPAN, the techniques of instruction have been assigned to other contributors, but an important point must be mentioned. In the essential-element and problem relationship indicated above, the teacher must understand that whatever method of instruction is employed, it is the teacher's duty to teach the essential elements through the principles of a functional psychology and, it is the pupil's responsibility to plan his work under guidance and to apply the essential elements in typical problems or projects of his choice. Development of this technique would be interesting to the reader, but this assignment refers to a narrower area of research.

In addition to the analysis technique, types of research that function in other areas of education are used also in industrial arts education. The normative-survey, documentary, experimental, and case-study techniques heretofore have been used the least, however with the shift of emphasis from the personal to the social objective in all education, the case-study techniques give evidence of more extended application.

The experimental technique in research, which

involves evaluation of one procedure in education over another through the study of controlled experimental factors, is used with negligible frequency in industrial arts education. Experimental research is assumed in much of its application to involve evaluation of outcomes by objective means. This assumes accuracy and strict objectivity. Industrial arts is largely a manipulative activity and measurements in projects would necessarily have to be exact. Therefore skill in manipulative processes would have to be emphasized as an outcome, but skill is only of secondary importance in industrial arts education. Evaluation of one method of instruction over another could not be determined unless there was exercise of high degrees of skill and unless the results were accurately measured, and these assume almost unattainably high degrees of skill in manipulation and certainly much drill.

Experimental research is usually carried on under controlled conditions. Such research, to be of value to the teacher, must discover outcomes attainable under typical teaching situations. Outcomes secured under controlled conditions are of little value in the usual industrial arts shop because the industrial arts teaching situations are the most variable in the school. And so they should be. Variation according to individual differences is the desire in all school life. There are, in effect, many materials, many interests, many operations present in the modern school shops. I have attempted much experimental research in industrial education and with presumably satisfactory and striking outcomes, but my respect for true values in presenting evidence that will advance the cause of industrial education compels me to say that experimental research under controlled conditions especially applied to evaluation of methodology of teaching is of little value to industrial arts.

Normative-survey techniques in industrial education exceed other types of research in frequency of use and in the value of the evidence gained. The normative-survey assumes a discovery of facts representing a certain situation—a study of norms. It may include a study of the reading interests of shop boys and the probable influence of the teacher in effecting these interests, or a study of the contiguous area of a high school to determine technical curriculum requirements, or a canvass of machinist craftsmen to determine the validity of machine-shop offerings in the industrial arts curriculum. The purpose is to gather evidence that will be helpful in making a decision concerning an educational problem.

There is now being conducted a study that involves the normative-survey technique by the research committee of the National Association of Industrial Teacher Trainers, affiliate of the American Vocational Association. This is a study of the education of industrial arts teachers in the United States. The evidence being gathered covers in the teacher education institutions (1) the industrial arts faculty, (2) the institution, (3) the aims, (4) the offerings, (5) directed teaching, and (6) projected changes in operating plans. This study, though not completed, should offer considerable evidence of value to the advancement of industrial arts education in the United States. A progress report of this study was made at the December, 1939, convention of the association at Grand Rapids, Michigan. The final report will appear in bulletin form.

It should be interesting to report evidence gained from this survey, and available at Grand Rapids, regarding the most frequently reported aims of teacher education—the norm in industrial-arts teacher-education aims, as it were. Administrative officers of seventy industrial arts departments were asked to rank twenty-three frequently mentioned aims. Seven of the aims were reported as standing out over the others with considerable margin. They are given here in order of rank.

It is the purpose in industrial arts teacher education to: (1) train teachers of industrial arts for public school service, (2) make students familiar with aims and problems of teaching industrial arts, (3) supply students with the necessary background of informational subject matter for teaching purposes, (4) attain a certain standard of shop skill in subjects where skill is demanded, (5) develop proper appreciations of the significance of industrial arts for its contributions to present-day living, (6) develop proper appreciations of the significance of industrial arts for its own sake—its place in the social heritage, and (7) promote a scholarly and scientific attitude towards the problems of teaching.

Other important information that should be available will be the status of curricula for industrial arts teacher-education in relation to core curricula suggested by accrediting agencies. Is there

much shop and little academic and professional preparation reported for industrial arts teacher education? A study of curricula is included to determine the extent to which schools report a balance of academic and professional preparation in addition to the shop offerings.

Research activities in industrial arts lag far behind philosophy. Not enough attention beyond lip service is given to the training in research methods during the graduate work of industrial arts teachers. Usually not more than an elementary course is offered in elementary research methods and reporting techniques. This is unfortunate because many of the ideas, beliefs, and concepts of modern industrial arts education need and deserve validation through practice and research whereas now they are accepted without question provided their presentation is made with conviction.

There is a growing true regard for research among industrial arts teachers. Everything possible should be done to assure continued growth of research, its spread, its continuance as a way of working, and to give it an integrated place with philosophy and practices. They belong together.

Have You Read?

ANONYMOUS. EVALUATION OF SECONDARY SCHOOLS. (Cooperative Study of Secondary School Standards. Washington, D. C. 1939.)

1. GENERAL REPORT.
2. HOW TO EVALUATE A SECONDARY SCHOOL (1940 Edition).
3. EVALUATIVE CRITERIA (1940 Edition)
4. EDUCATIONAL TEMPERATURES (1940 Edition).
5. SUPPLEMENTARY REPRINTS.
6. EVALUATION OF A SECONDARY SCHOOL LIBRARY (1938 Edition).

These six volumes, representing as they do the culmination of six years of work by staff members of the Cooperative Study, are, in the words of George F. Zook, President, American Council on Education, "exceptionally well planned, carefully carried through and fully implemented at the end. I believe the Study deserves high rank among the educational studies that have been well done."

Formed by the regional accrediting associations with the assistance of individuals from the National Education Association, the U. S. Office of Education, and departments of the N. E. A., the Cooperative Study staff has worked for six years in developing instruments for measuring the secondary school, in validating the instruments, and in developing attractive charts and diagrams which enable a school executive to check the accomplishments and standards of his school against those of other schools.

Administrators and teachers in secondary schools will find this set of books extremely valuable for several purposes. If a school system is to be evaluated for self-rating purposes—in order to satisfy the desire of members of the staff to know how the school measures when compared with other schools—the books provide the most accurate, reliable and convenient source of methods and norms for evaluation. Professionally minded school people in the secondary field will want to read these volumes in order to keep themselves up to date with regard to what is being done in other schools relative to self-evaluation.

Finally, those school systems which have a problem in public relations in justifying continued expenditures for secondary schools, will find in the set a ready means for comparing their system with others. The prestige attached to the Cooperative Study will impress laymen as well as professional people with the accuracy and reliability of the standards set forth in these six volumes.

Orders for any or all of the volumes should be sent to The Cooperative Study of Secondary School Standards, 744 Jackson Place, Washington, D. C.

BAWDEN, W. T., AND OTHERS. INDUSTRIAL ARTS IN MODERN EDUCATION. (Peoria, Ill.: Manual Arts Press, 1934. Pp. 168.)

This volume, published in 1934, in celebration of the twenty-fifth anniversary of the Manual Arts Conference of the Mississippi Valley, contains eight chapters which discuss subjects ranging from educational philosophy to recent history and trends and the growth of the literature of industrial arts. The various chapters provide material for a rather comprehensive outline of the subject of industrial arts. Especially valuable for the reader is the extensive and selected bibliography which appears, divided into categories identical with the chapter headings.

The Manual Arts Conference of the Mississippi Valley is made up of representatives from departments in teacher-training institutions and state departments of education. The representative in each instance is the head of the department in the teacher-training institution. This book, although now six years old, is extremely valuable as a reference for those who wish to become better informed about the field of industrial arts.

Keeping Abreast of the Times

(Material for this section of THE PHI DELTA KAPPAN is obtained from several hundred magazines, newspapers, press bureau releases, chapter news letters and private letters. While the editors check as many of these items as possible, it seems inevitable that some errors will occur. We will appreciate the calling to our attention of any such errors.—W. H. A.)

Personal and Professional

TRACY T. ALLEN* is the president of the Eastern States Association of Professional Schools for Teachers.

ERWIN H. AMICK, formerly with the Standard Oil Development Company, is the newly appointed assistant professor in chemical engineering at the University of Pennsylvania.

HENRY J. ARNOLD,* formerly at the Wittenberg, New York, College, is the president of Hartwick College, Oneonta, New York.

The new dean of men at the State Teachers College, Edinboro, Pennsylvania, is ORVILLE R. BAILEY.*

CLIFTON AYRES BAKER,* dean of Rio Baptist College, Rio de Janeiro, Brazil, died on November 22 at the age of fifty years.

FRANK A. BALCH, for fourteen years superintendent of the Weehawken, New Jersey, public schools, died on December 12.

FRANK LEWELLING BALLARD, formerly professor of extension methods at Oregon State College, has been appointed president of that institution. His appointment is effective on July 1, 1940.

MARVIN R. BARKER has been recently appointed Field Agent of the Vocational Rehabilitation Division, West Virginia State Department of Education.

ROSWELL P. BARNES, for several years Associate Secretary of the Department of International Justice and Goodwill of the Federal Council of the Churches of Christ in America, has been appointed Associate General Secretary of the Council.

ERNEST SUTHERLAND BATES, formerly professor of Philosophy at Columbia University, died on December 4 at the age of sixty years.

STEPHEN F. BAYNE has been re-elected associate superintendent of schools by the New York City Board of Education.

As successor to H. L. BENSHOOF,* C. I. ERNISSE has been elected superintendent of schools at Vail, Iowa.

The newly elected president of Ohio State University is HOWARD L. BEVIS, since 1935 professor in the School of Business Administration of Harvard University.

ALEXANDER BOEKER, formerly on the faculty of Southwestern, Memphis, Tennessee, has been appointed to a position at Harvard University.

The new president of Southwestern State Teachers College, Weatherford, Oklahoma, is JAMES B. BOREN, formerly superintendent of the Mangum, Oklahoma, schools.

ROBERT L. BOSBE is the newly appointed assistant professor of accountancy in the school of commerce of the University of Illinois.

TUCKER BROOKE, Sterling professor of English and fellow of Calhoun College, Yale University, has been appointed visiting professor of English at the College of the City of New York.

The newly elected State Superintendent of Public Instruction for the State of Kentucky is JOHN W. BROOKER.*

CLINTON E. CARPENTER, the new president of the Worcester, Massachusetts, State Teachers College, was formerly director of teacher training at the State Teachers College, Fitchburg, Massachusetts.

The newly appointed head of the department of animal husbandry in the College of Agriculture of the University of Illinois is W. E. CARROLL.

ULYSSES G. CHAMBRÉ, formerly on the staff of the Central Brooklyn Music Center, Brooklyn, New York, is the new director of music at the Cheyney Training School for Teachers, Cheyney, Pennsylvania.

ROYAL N. CHAPMAN, dean of the graduate school at the University of Minnesota, died on December 2 at the age of fifty years.

ROBERT CARLTON CLARK, head of the department of history at the University of Oregon, died on December 4.

As successor to WALTER G. CLIPPINGER, JOHN RUSKIN HOWE is the new president of Otterbein College at Westerville, Ohio.

HOUSTON COLE* has been succeeded as superin-

*Names marked with an asterisk are those of members of Phi Delta Kappa.

tendent of the Tuscaloosa County, Alabama, schools by RAYBURN FISHER.*

EDWARD DAY COLLINS, well known for his work in organizing the summer session language schools at Middlebury College, Vermont, and formerly acting president and controller of that institution, died at the age of seventy years on January 1.

The newly appointed director of vocational guidance in the Ferndale, Michigan, public schools is CLIFFORD JOHN CORROUGH.*

The newly elected president of the Oklahoma Academy of Science is G. L. CROSS, head of the department of botany at the University of Oklahoma. Other officers include: H. I. FEATHERLY, Oklahoma A. and M. College, Stillwater, secretary-treasurer; and CHARLES A. WHITMER, assistant professor of physics in the University of Oklahoma, assistant secretary-treasurer.

M. C. CUNNINGHAM,* formerly superintendent of schools at Desloge, Missouri, is the new director of financial accounting in the Missouri State Department of Education.

GEORGE HARVISON DEER* is the newly appointed professor of education at the Livingston State Teachers College, Livingston, Alabama.

WILLIAM MCL. DUNBAR, professor of architecture at Cornell University, has joined the faculty of the college of architecture at the University of New Mexico for the current year.

THOMAS D. EASON* of the Virginia State Department of Education died on November 4.

DAVID W. EBBERT, onetime president of Ursinus College, Collegeville, Pennsylvania, died on December 3 at the age of eighty-six years.

The president of the American Chemical Society for the year 1941 will be WILLIAM LLOYD EVANS, head of the department of chemistry, Ohio State University. The president for 1940 is SAMUEL COLVILLE LIND, director of the Institute of Technology, University of Minnesota.

B. W. FAIRBANKS is the newly appointed professor of swine husbandry in the College of Agriculture of the University of Illinois.

The newly elected president of the Association of Land Grant Colleges is FRANCIS D. FARRELL, president of Kansas State Agricultural College, Manhattan. The new vice-president of the Association is WALTER C. COFFEY,* dean of the College of Agriculture, University of Minnesota.

The newly appointed supervisor of nursing education in the State Education Department, Albany, New York, is CLAIRE H. FAVREAU.

ROBERT FECHNER, director of the CCC, died on December 31 at the age of sixty-three years. Under his able leadership the CCC proved itself to be one of the universally approved alphabetical agencies of the United States Government.

The newly appointed dean of the School of Engineering of George Washington University is FREDERICK M. FEIKER.

The newly appointed high school supervisor of the State of Montana is GEORGE V. FINLEY.

VERNE C. FRYKLUND* of Wayne University is the newly elected president of the National Association of Industrial Teacher Trainers.

HUGH AUGUSTINE GAYNOR, formerly professor of Latin at Georgetown University, died on November 27 at the age of sixty-six years.

The newly appointed head of the department of commerce at the New Mexico Normal University, Las Vegas, New Mexico, is E. DANA GIBSON.*

The newly appointed head of the department of fine arts of the Michigan State Normal College, Ypsilanti, is ORLO M. GILL.

The newly elected president of the Louisiana Health, Physical Education and Recreation Association is GEORGE M. GLOSS, associate professor of health and physical education at the Louisiana State University.

CHARLES HAINES, formerly a member of the faculty of Harvard University, was recently elected president of the Pueblo Junior College, Pueblo, Colorado.

At the age of thirty-six years, ROBERT ALEXANDER HALIBURTON, associate professor of economics at Franklin, Indiana, College, died on November 29.

The newly named acting dean of the College of Pharmacy of the University of Southern California is ALVAH G. HALL,* professor of materia medica and pharmacognosy. He succeeds LAIRD J. STABLER.

MILTON DULANEY HALL, for forty-three years superintendent of schools of Fairfax County, Virginia, died on December 2.

The newly named associate professor in the department of English at the Florence, Alabama, State Teachers College is W. L. HALSTEAD.

MAX S. HANDMAN, for eight years professor of economics at the University of Michigan, died on December 26 at the age of fifty-four years.

The newly appointed member of the staff of the department of commerce in the Mary Washington College, Fredericksburg, Virginia, is J. MARSHALL HANNA,* formerly head of the commercial department of the Fort Lee, New Jersey, High School.

ROBERT R. HANNON is the newly appointed Secretary of the State Board of Medical Examiners and Executive Secretary of the Medical Grievance Committee of the State Education Department of the State of New York.

H. DEIGH HARRISON has been appointed to the post of principal of the Tuscaloosa, Alabama, Junior High School.

Newly appointed executives of schools for the deaf include: JOSEPH E. HEALY, Superintendent of the Virginia State School; HARLEY Z. WOODEN,* Superintendent of the Michigan State School; K. C. VAN ALLEN, Principal of the Halifax, Nova Scotia, School; H. M. QUIGLEY, Superintendent of the Kansas State School; E. R. WRIGHT, Superintendent of the Texas State School; K. D. SANDERS, Principal of the Vermont State School; A. S. MYKELBUST, Superintendent of the South Dakota State School; and WALLACE J. FINCH, Principal of the Bell School, Chicago, Illinois.

H. R. HEININGER has been elected president of the Evangelical Theological Seminary, Naperville, Illinois.

HENRY W. HOLMES* has resigned as dean of the Harvard Graduate School of Education to serve as chairman of the Harvard University Committee on Educational Relations. His resignation will be effective on September 1, 1940. He will be succeeded in the deanship by FRANCIS T. SPAULDING.*

CLIFFORD G. HOUSTON,* appointed dean of the summer school of the University of Colorado, is the director of the extension department of that institution.

MAX H. HOUTCHENS has been appointed to the staff of the business department of Eastern Kentucky State Teachers College, Richmond, Kentucky.

At the age of sixty-three years, E. B. HUTCHINS, formerly professor of chemistry at the University of Wisconsin, died on December 11.

MOISE J. ISRAEL, the new superintendent of the city schools of Bogalusa, Louisiana, was formerly professor of psychology at Southeastern Louisiana College, Hammond, Louisiana.

FERNAND JAGU, formerly teacher of French and Spanish at Union College, Schenectady, New York, died on December 3 at the age of seventy-three.

JOE JENNINGS* is the newly appointed superintendent of Indian Education for the Eastern Tribes, with headquarters at Washington, D. C.

JOHN BLACK JOHNSTON, dean of the College of Science, Literature and Art, University of Minnesota, from 1914 to 1937, died recently at the age of seventy-one years.

AUSTIN JULIAN, vocational director of Lincoln Hall, Lincolndale, New York, died on December 28 at the age of fifty-eight years.

JULIUS KAPLAN, member of the staff of the graduate school of Yeshiva College, New York City, and chairman of the faculty of the teachers institute of the college, died on November 29 at the age of fifty-five years.

As successor to OLIVER L. KAPSNER, BENJAMIN J. STEIN has been appointed to the librarianship of St. John's University, Collegeville, Minnesota.

After forty-one years' association with the Chicago Public Schools, HARRY KEELER, assistant superintendent of Chicago Schools, died on December 19 at the age of sixty-four years.

WILLIAM P. KELLAM, formerly librarian of the North Carolina State College, Raleigh, has been appointed to the librarianship of West Virginia University.

J. REDDING KELLY, formerly head of the department of art at Brooklyn College, died on December 8 at the age of seventy-one years.

As successor to FRED C. KENNEY, ROBERT D. HAWLEY is the new treasurer of Massachusetts State College. He has been secretary of the college since 1926.

WILLIAM KEYES, for forty-eight years a teacher in schools in New England, Kentucky, and Long Island, died at the age of seventy-six years on December 26.

WALTER SMITH KILPATRICK has been elected president of Cedarville, Ohio, College, to succeed W. R. MCCHESNEY.

EARL EDWIN KLEIN is the newly appointed associate professor of social administration in the College of Liberal Arts and Sciences of the University of Illinois.

The newly appointed president of Concordia Teachers College, River Forest, Illinois, is A. W. KLINCK.

WARREN K. LAYTON* is dean of students in the Liberal Arts College of Wayne University, following his recent appointment.

FREDERIC SCHILLER LEE of the department of physiology at Columbia University, died on December 14 at the age of eighty years.

As successor to FREDERICK LEIGHTON, CHARLES E. RILEY has been appointed superintendent of schools at Oswego, New York.

OSCAR J. LILJENSTEIN has been appointed director of physical education at the East Stroudsburg, Pennsylvania, State Teachers College.

J. W. LLOYD* is the new head of the department of horticulture in the College of Agriculture of the University of Illinois.

In the college of Agriculture of the University of Illinois, RICHARD V. LOTT is the newly appointed professor of pomology and JOHN B. WINGERT has been appointed professor of floriculture.

EDWARD J. LYNCH is the newly appointed New England manager for the Pittsburgh Institute of Aeronautics.

Effective July 1, 1940, the present executive secretary of the Washington Education Association, ARTHUR L. MARSH,* will become assistant secretary of the organization and the present assistant secretary, JOE CHANDLER,* will take the office as executive secretary.

CHARLES DAVID MARX, for thirty-two years a member of the faculty of Leland Stanford University, died on December 31 at the age of eighty-two years.

As successor to WALLACE EDWARD MASON, LLOYD PERCY YOUNG* is the new president of the Keene, New Hampshire, State Teachers College.

As successor to HARRY VICTOR MASTERS,* HARRY LEIGH BAKER* has been appointed head of the department of education of Drake University.

WILLIAM J. MCCALLUM, formerly supervisor of student teachers at the Stephen F. Austin State Teachers College, Nacogdoches, Texas, is the new assistant director in the division of employment in the NYA in Texas.

SAMUEL R. MCCLEERY, formerly on the staff of the Edwin Gould Foundation, New York, has been appointed superintendent of the Jefferson Farm School, Watertown, New York.

CHARLES WILLIAM MCCRACKEN* is the newly appointed dean of men of Muskingum College, New Concord, Ohio.

LEONARD BEECHER MCWHOOD, professor of music at Dartmouth College, died on December 4 at the age of sixty-nine years.

ERNEST I. MILLER, Assistant Librarian of the TVA Technical Library, Knoxville, Tennessee, has been commissioned to organize a technical reference and research library at the Bonneville, Oregon, project.

KELLY MILLER, for forty-nine years a member of the faculty of Howard University, Washington, D. C., died on December 29 at the age of seventy-six years.

At the age of eighty-one years WILLIAM SNOW MILLER, professor emeritus at the University of Wisconsin, died on December 26.

REXFORD S. MITCHELL, formerly assistant to the president of Lawrence College, Appleton, Wisconsin, is the new president of the La Crosse, Wisconsin, State Teachers College.

The newly appointed acting dean of the Graduate School of Cornell University is B. S. MONROE, who succeeds FLOYD K. RICHTMYER.*

After ten years as president of the Hannibal-La Grange College, Hannibal, Missouri, ANDREW F. MORRIS* has tendered his resignation, to become effective at the end of the present school term.

LOUISE MOORE of Poughkeepsie, New York, has been appointed to the staff of the U. S. Office of Education, according to an announcement by J. W. STUDEBAKER. She succeeds ANNA L. BURDICK as Trade and Industrial Education Agent in the Vocational Division of the U. S. Office.

The newly appointed member of the New York State Regents' Commission on State Aid for Education is PAUL R. MORT,* professor of education, Teachers College, Columbia University.

The newly named dean of the University of Tennessee is JOHN MOSLEY, president of Oklahoma Central State Teachers College.

JAMES A. NAISMITH, professor emeritus of physical education at the University of Kansas, died on November 28 at the age of seventy-eight years.

JONAS B. NATHANSON, for twenty-three years a member of the faculty of Carnegie Institute of Technology, died on November 25 at the age of fifty years.

As a successor to C. O. NEWLUN,* E. M. EDMONDSON has been named acting director of the University of Oklahoma senior and junior high schools.

S. B. NISSEN is the newly appointed executive secretary of the South Dakota Education Association. He succeeds N. E. STEELE,* who has been executive secretary since 1924, and who has been appointed president of the South Dakota Northern State Teachers College, Aberdeen, South Dakota.

The newly appointed president of the East Stroudsburg, Pennsylvania, State Teachers College is JOSEPH F. NOONAN.*

The newly appointed head of the department of

chemistry of the University of Rochester is W. ALBERT NOYES, JR., who succeeds VICTOR J. CHAMBERS.

CHARLES SKEELE PALMER, at one time president of the Colorado School of Mines, died in Pittsburgh on November 30 at the age of eighty-one years.

The newly elected chairman of the College Entrance Examination Board is MARION E. PARK, president of Bryn Mawr College, who succeeds RICHARD M. GUMMERE, chairman of the committee on admissions at Harvard University. Other members of the board include: KARL G. MILLER* of the University of Pennsylvania, vice-chairman; FREDERICK C. FERRY, president emeritus of Hamilton College; WILLIAM A. NEILSON, president emeritus of Smith College, and MARY E. WOOLLEY, president emeritus of Mount Holyoke College.

WILLIAM EDWARD PARSONS, since 1938 associate professor of architecture at Yale University, died on December 17 at the age of sixty-seven years.

HENRY GREENLEAF PEARSON, formerly head of the department of English and history at the Massachusetts Institute of Technology, died on December 28 at the age of sixty-nine years.

The former director of the Montreal Neurological Institute, and professor of neurology at McGill University, WILDER PENFIELD, is the newly elected president of the Royal College of Physicians and Surgeons of Canada.

The recipient of the 1940 American Education Award is DR. WILLIAM LYON PHELPS of Yale University, according to an announcement by the Associated Exhibitors of the National Education Association. Presentation of the Award will be made by DR. BEN GRAHAM* of the American Association of School Administrators at the St. Louis Auditorium on February 27.

ROMAULD G. PIATKOWSKI, professor at St. Mary's College, Orchard Lake, Michigan, died on November 30 at the age of eighty-three years.

The newly elected life trustees of Columbia University are EUGENE HILLHOUSE POOL and JOHN GILLESPIE JACKSON, who fill vacancies caused by the deaths of STEPHEN G. WILLIAMS and AMBROSE D. HENRY.

Recently elected officers of the Southern California Social Science Association are as follows: W. C. QUANDT,* president; HELEN MILLER BAILEY, vice-president; LEWIS W. CLARK,* secretary, and MARGARET GARY, treasurer.

FREDERICK L. REDEFER,* executive secretary of the Progressive Education Association, has been named to the Board of Consultants of "Columbia's American School of the Air," sponsored by the Columbia Broadcasting System and the Progressive Education Association.

H. EUGENE REPMAN, the new supervisor of elementary school music in the Rochester, Pennsylvania, public schools, was formerly supervisor of music in the California, Pennsylvania, schools.

The new dean of the School of Education at Louisiana State University is EDWARD BANE ROBERT,* who succeeds CLARENCE A. IVES.*

JOSEPH S. ROUCEK, formerly of the staff of the department of general education of New York University, has been promoted to the rank of associate professor of political science and sociology, and is the new chairman of the department of political science at Hofstra College, Hampstead, New York.

As successor to the late HENRY C. SANBORN, KENNETH L. SHERMAN was elected superintendent of the Andover, Massachusetts, schools.

The acting president of the New York State College for Teachers at Albany, New York, is JOHN M. SAYLES.

The newly elected president of Illinois Wesleyan University at Bloomington, Illinois, is WILLIAM E. SHAW.

CHARLES SIEPMANN, formerly director of radio programs for the British Broadcasting Corporation, has been newly appointed special lecturer at Harvard University.

The new acting dean of the graduate school of Ohio State University is ALPHEUS W. SMITH, chairman of the department of physics.

The newly appointed head of the art department of the University of Wyoming is J. B. SMITH, formerly chairman of the division of fine arts at Adams State Teachers College, Alamosa, Colorado.

Recently elected officers of the Kentucky Council for the Social Studies include: RAYMOND SNODGRASS, Paducah, president; LEO ASHBY, Rich Pond, vice-president; LUCILE CHAPMAN, Ashland, secretary-treasurer; HOWARD W. ROBEY, editor.

As successor to E. LEE SOREY, WALTER WOODS is the new superintendent of the Boys' Industrial School near Topeka, Kansas.

G. WARREN SPAULDING, acting superintendent of Haskell Institute, has been appointed to the superintendency of that institution.

DOUGLAS SPENCER, formerly acting director of the guidance laboratory, Teachers College, Columbia Uni-

versity, has been appointed assistant professor of psychology at Queens College, Flushing, New York.

HELEN E. STENSON, formerly field supervisor at the Western State Teachers College, Kalamazoo, Michigan, is the new rural field supervisor at the Southern Illinois State Normal University, Carbondale, Illinois.

WILLIAM D. STRATFORD,* formerly assistant to the secretary of Teachers College, Columbia University, has been appointed to the staff of Teachers College, University of Cincinnati.

ROY F. STREET, formerly director of mental hygiene for the Battle Creek, Michigan, schools, has been appointed visiting professor of education at the University of Illinois.

In order to join the staff of the Gregg Publishing Company, ROBERT N. TARKINGTON* has resigned as director of the division of commerce, Hofstra College of New York University.

EDWARD H. TEMPLE* has been appointed Head of the department of drafting in the Mechanic Arts High School of Boston, Massachusetts.

CHARLES R. THIBADEAU, formerly superintendent of the Newburyport, Massachusetts, schools, has been recently appointed to the superintendency at Weymouth, Massachusetts.

WILLIAM M. TIMMONS, the new assistant professor of speech at Ohio State University, was formerly an instructor at Carleton College, Northfield, Minnesota.

WILLIAM PETERFIELD TRENT, formerly professor of English literature at Columbia University, died on December 6.

E. LEE TRINKLE, Chairman of the Virginia State Board of Education, died on November 25.

TRACY F. TYLER* is a newly appointed associate professor of education at the University of Minnesota.

The newly appointed Director of the New York State Library is ROBERT W. G. VAIL, whose appointment fills the vacancy in this office since the resignation of JAMES I. WYER. The newly appointed director has been librarian of the American Antiquarian Society at Worcester, Massachusetts since 1930.

FRED R. VON BORGERSRODE* is a newly appointed member of the staff of the Minnesota Education Association, after having been a member of the faculty of the College of Education of the University of Minnesota.

The newly appointed acting chairman of the department of mechanical engineering, College of Technology, University of Maine, is HARRY DEXTER WATSON.

The newly elected president of the East Central Division of the Illinois Education Association is O. F. WEBER,* professor of education at the University of Illinois.

Promotions in the College of Education, University of Illinois, were: O. F. WEBER,* from Associate Professor to full Professor; L. W. WILLIAMS,* from Instructor to Assistant Professor; A. F. DODGE,* from Assistant Professor to Associate Professor; M. K. HUMBLE,* from Associate to Assistant Professor; W. E. HARNISH,* from Associate to Assistant Professor; LIESETTE J. MCHARRY, from Associate to Assistant Professor.

PAUL GARFIELD WESTON, founder and director of the Jamestown Public Health Laboratory, and formerly professor of pathology and bacteriology at Temple University, Philadelphia, Pennsylvania, died on December 18.

JOHN E. WHITCRAFT has been appointed to head the new department of business and secretarial studies in the College of Liberal Arts of Alfred University, Alfred, New York.

The new dean of the Liberal Arts College at Wayne University is WILLIAM W. WHITEHOUSE, formerly dean of Albion College.

As a successor to PHINEAS L. WINDSOR, CARL M. WHITE, chairman of the division of the library and library school at the University of North Carolina, will be the new director of the library and library school at the University of Illinois. His appointment is to become effective in September, 1940.

Meetings and Conferences

FEBRUARY 15-16-17. Ninth Annual Rocky Mountain Speech Conference, sponsored by the University of Denver, Denver, Colorado.

FEBRUARY 21-24. American College Personnel Association, St. Louis, Missouri.

FEBRUARY 21-24. National Vocational Guidance Association, St. Louis, Missouri.

FEBRUARY 22-23. National Council of Teachers of Mathematics, St. Louis, Missouri.

FEBRUARY 22-23-24. International Council for Exceptional Children, Pittsburgh, Pennsylvania.

FEBRUARY 23-24. Inter-American Bibliographical and Library Association, Washington, D. C.

FEBRUARY 24. National Advisory Council on School Building Problems, St. Louis, Missouri.

FEBRUARY 24. National Council for the Social Studies, Hotel Statler, St. Louis, Missouri.

FEBRUARY 24-27. American Educational Research Association, St. Louis, Missouri.

FEBRUARY 24-29. American Association of School Administrators, St. Louis, Missouri.

FEBRUARY 24-29. National Education Association, Department of Elementary School Principals, St. Louis, Missouri.

FEBRUARY 24-29. National Education Association, Department of Secondary School Principals, St. Louis, Missouri.

FEBRUARY 25. National Association of Colleges and Departments of Education, St. Louis, Missouri.

FEBRUARY 26-27-28. Biennial convocation of Kappa Delta Pi. Broadview Hotel, East St. Louis, Illinois.

FEBRUARY 26-27-28. National Education Association, Department of Supervisors and Directors of Instruction, St. Louis, Missouri.

FEBRUARY 27, 1940. Joint meeting, the American Classical League and the National Federation of Modern Language Teachers. De Soto Hotel, St. Louis, Missouri.

FEBRUARY 29-MARCH 1. American Association of Junior Colleges, Columbia, Missouri.

MARCH 15-16. Sixteenth Annual Junior High School Conference of New York University, New York City.

MARCH 27-28-29. National Catholic Educational Association, Kansas City, Missouri.

APRIL 3-4-5. Inland Empire Education Association, Spokane, Washington.

APRIL 3-4-5. North Central Association of Colleges and Secondary Schools, Chicago, Illinois.

APRIL 4-5-6. Eastern States Association of Professional Schools for Teachers, New York City.

APRIL 8-12. Southern Association of Colleges and Secondary Schools, Atlanta, Georgia.

APRIL 14-20. The Twelfth Annual Science and Engineering Fair held by the American Institute and the Science and Engineering Clubs, with the cooperation of American Museum of Natural History, Education Hall, New York City.

APRIL 29-MAY 3. American Association for Health, Physical Education and Recreation, Chicago, Illinois.

APRIL 29-MAY 3. Forty-seventh Annual Study Conference, Association for Childhood Education, Milwaukee, Wisconsin.

MAY 3-4. American Council on Education, Washington, D. C.

JUNE 30-JULY 4. National Education Association, Milwaukee, Wisconsin.

Public Schools

Reports from various areas of the United States indicate that the current school year will be a difficult one for public schools in many sections of the country. The long-continued economic depression, the current increase in the cost of relief and old-age pensions combine to make the financial picture of many American school systems very gloomy. The two statements of philosophy relative to the financing of public schools in the United States which are printed below seem to characterize two rather different points of view. A comparative reading of the two is suggested.

The first statement is made up of excerpts from the report of the special committee on Economical and Efficient Education of the New York State Chamber of Commerce. The second is from "Evaluating the Public Schools," the report of the Commission on The Emergency in Education.

CHAMBER OF COMMERCE

1. Whether or not anything needs to be done with or to the New York State educational system depends on two things:

(1) Whether the system is delivering to the citizens of the State all that it should and nothing that it should not;

(2) Whether the amount which the State is now spending on education is being spent intelligently and whether it is greater than the State should spend.

2. The great purpose for which the schools were founded is to preserve and strengthen the State by making better, abler citizens. Other benefits derived from it are secondary.

By and large states are not preserved and strengthened by culture or education or knowledge. They stand on character, morals and physical well-being.

A review of history indicates that as culture rises, morals and physical well-being go down and that often the destruction or disintegration of the State has followed.

3. We place FIRST on our list of things necessary to produce "The Schools New York State Wants" a Deep, True Religious Understanding and Viewpoint.

4. . . . the question of health . . . we place SECOND in importance. . . . We need to build powerful bodies and nervous systems quite as much as educated minds. . . . The State has been doing something along this line, but it should do more.

5. The New York State schools are educating youngsters to make them better citizens. Two things are especially necessary for that . . . a knowledge and appreciation of our political system . . . and . . . a better understanding of international conditions and relationships.

6. Our experience and our observation convince us that a large percentage of students in every grade are just trying to get by, to stay in. . . . When they get out they cannot spell—they cannot write—they cannot speak on their feet—they cannot read out loud—they cannot compose a good letter or statement—they cannot multiply 4 by $3\frac{1}{2}$ and divide it by 7 without a pencil and paper and a considerable time. We realize that it is very difficult to make students serious and thorough with their work—but somehow it must be accomplished.

From the standpoint of a youngster's value to the State—from an educational standpoint, from a cultural standpoint, from the standpoint of employers—it doesn't matter much what a youngster studies or how much ground he covers; the all-important thing is how well he plans and accomplishes what he undertakes to do. Better they spend their time working or even in the ball parks—anything in which they are doing what they do the best they possibly can and with interest.

The greatest factor in arousing that interest on the part of students is the teachers. The importance of their being able and inspiring cannot be overstressed.

Outside of religion and health, perfect, complete work is the most important thing and the thing of which there is least.

7. . . . there is a definite line which must be recognized and that is the line between the amount of education it requires to kill illiteracy and the amount of education we give beyond that point. We must not have an illiterate people; all but defectives must be taught to read, write and figure reasonably well. But there is a fair question as to how many should go farther. Some do not want it, others are not fitted to take it, and these should stop when they have passed the point of illiteracy. The State must endeavor to carry all the youngsters up to that point, but beyond that point youngsters will do better if they have to put up a real fight to go on, and beyond that point it is a fair question whether the State should bear all the expense or whether parents who are amply able to educate their own youngsters should pay for it.

In not carrying students too far and in having parents who are able to do so pay the cost of all education beyond illiteracy is found a means of reducing the cost.

8. The vocational field is as wide as the combined life works of all the men and women in this country, and we may as well face the fact that many young men cannot get employment if they get no vocational training and neglect their opportunities in school. . . . Some of our young people so inclined should have diplomatic training—and a knowledge of foreign nations and their business activities.

9. We would propose that there be appointed a "carrying-on" board or commission, with very considerable power, to take the work done by the Inquiry and from that and from what else the new body can uncover to set up and accurately define an ideal state educational system. . . . It should not be made up of educators alone—because educators could not avoid having the present system too much in mind. One-half its personnel should be sound, able businessmen with successful records, high intelligence and time enough available.

Emergency Commission

Educational Opportunity

Universal education. Funds to provide every child and youth a complete educational opportunity from early childhood to the age at which employment is possible and socially desirable. This right to be preserved regardless of residence, race, or economic status and to constitute an inalienable claim on the resources of local, state and national governments.

Lifelong learning. Educational opportunities at public expense for every adult whenever such opportunities are required in the public interest.

Effective teaching. In every classroom competent teachers maintained at an economic level which will secure a high quality of socially motivated and broadly trained professional service.

Adequate Revenues

Equitable taxation. For the adequate support of all governmental activities, including the schools, a stable, varied, and flexible tax system, providing for a just sharing of the cost of government by all members of the community.

Public information. Accurate, intelligible, and frequent reports to taxpayers and the public on the management of the school money so that complete understanding and constructive attitudes with respect to school taxes and services may prevail.

Constructive Economy

School board independence. In every school system a board of education responsive to the will of the whole people and free to adopt and carry out truly efficient and economical financial policies for the schools.

Economical Administration. A uniform and continuous policy of honest, economical, and productive spending of all school moneys.

LOCAL MANAGEMENT

Adequate local units. In every community trained educational leadership and other services secured through a local unit of school administration large enough to make such services financially possible and desirable.

Community initiative. For every school district the right to offer its children an education superior to state minimum standards and to seek and develop new methods intended to improve the work of the schools.

STATE RESPONSIBILITY

Equalization of educational opportunity. For every school district, sufficient financial support from the state to permit the maintenance of an acceptable state minimum program of education and to relieve the local property tax when this tax, upon which local initiative depends, is carrying an unfair share of the cost of government.

Professional leadership. Competent leadership in every state department of education so that reasonable minimum financial standards may be established and educational progress encouraged throughout the state.

Fiscal planning. In every state a long-time financial plan for public education, comprehensive in scope, based on experienced judgment and objective data, cooperatively developed, continually subject to review and revision, and reflecting faithfully the broad educational policy of the people.

NATIONAL INTEREST

Open schools. For every child deprived of education by emergency conditions beyond the control of his own community and state, immediate restoration of these rights through assistance from the Federal Government to the state concerned.

Federal support. Sufficient Federal support for the schools of the several states to protect the nation's interest in an educated citizenship, without Federal control over state and local educational policies.

If America is to recover prosperity and persist as a democratic nation these essentials must be provided.

Beginning in January, the Sixteenth Decennial Census of the United States is expected to prove itself the most comprehensive statistical analysis ever made of any nation and its sociological and economic resources. Virtually every angle of American life and activity will be touched by at least one of the 11 major census enumerations.

Separate censuses, each complete in itself and on a national basis, will be made respectively on business, manufactures, mines and quarries, population, employment, occupations, agriculture, housing, drainage, and irrigation. The major portion of the field work, which will require some 120,000 enumerators under about 650 regional chiefs, will be completed by about the middle of the summer. Reports on basic statistics will be released for business and manufactures by early fall, in time for use in planning production, promotion, and selling programs for 1940.

Especially interesting will be the results of the housing census, undertaken for the first time in 1940 on a national scale.

Have You Read?

PROFFITT, MARIS M. INDUSTRIAL ARTS; ITS INTERPRETATION IN AMERICAN SCHOOLS. (Washington, D. C.: U. S. Off. of Ed., 1937, Bull. No. 34. Pp. 125.) This committee report is an overview of existing conditions in the teaching of industrial arts in American schools, at all levels from the elementary school to adult education. The preface and introductory chapters constitute a good statement of philosophy. There is no bibliography.

STRUCK, F. THEODORE. CREATIVE TEACHING. (New York: John Wiley & Sons, 1938. Pp. xxv + 623.) This book is valuable not only for its discussions of methods in the specific field of industrial arts, but also for its statement of a broad underlying philosophy of education as a necessity in teaching in any subject field. While the author is concerned primarily with teaching in the field of industrial arts, his book is valuable for the teacher in any field or at any level.

THE NEW YORK TEACHER. STATE AID NUMBER. (December, 1939, 5, 1-37.) This issue of the magazine, published by the Teachers' Union, Local Five, American Federation of Teachers, is one of the most attractive and most effective bulletins prepared on the subject of financial support for schools that has appeared in a long time. The editors have made unusually effective use of photographs, simple drawings, and graphs, as well as boxed letter press material to present the story of free schools in America. The effect of decreased support for schools upon children, parents, teachers, and the community are discussed.

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EDUCATION ABSTRACTS

Of Concern to Phi Delta Kappa

EXHIBIT A. A. S. A.

PHI DELTA KAPPA has arranged for exhibit space at the meeting of the American Association of School Administrators in St. Louis, February 24-29. Space B-22 has been reserved for the use of Phi Delta Kappa publications. Members are cordially invited to visit and inspect the exhibit. Wm. H. Anderson, Jr., associate editor of publications, will be in charge of the exhibit. He will be glad to tell you about *Teaching as a Man's Job, Education Abstracts,* and future plans for THE PHI DELTA KAPPAN. Tickets for the annual Tuesday luncheon may also be secured at the exhibit. We hope you will remember B-22 when you plan a meeting place in the midst of your exhibits visiting.

LUNCHEON

THE ANNUAL Tuesday luncheon for Phi Delta Kappa will be held in St. Louis on February 27, in the Gold Room at Hotel Jefferson. This luncheon is always held at the time and place of the annual meeting of the American Association of School Administrators. It is a popular luncheon for all members of Phi Delta Kappa in attendance at the meeting, and this year an attendance of approximately 600 is anticipated. Tickets are $1.00 each and they may be purchased at the A. A. S. A. registration headquarters, at the Phi Delta Kappa exhibit in space B-22, or at Phi Delta Kappa headquarters, room 947 in the Coronado Hotel, where the national officers will be located for executive committee sessions. G. H. V. Melone will represent the Beta Field Chapter of St. Louis on the host committee for St. Louis.

COUNCIL

MEETING FOR preliminary session of the district conferences and for general acquaintance on December 27, the Eighteenth National Council of Phi Delta Kappa began its serious work in general sessions as scheduled at 9 a.m. on December 28. These sessions continued without interruption until adjournment at 4:30 p.m. on December 30 except for such intermissions as were necessary to provide time for committee sessions.

Seventy-four delegates and alternates representing campus chapters, forty-three delegates and alternates representing field chapters, and fourteen national and district officials, or a total of one hundred thirty-one Phi Delta Kappans, constituted the membership of the council. In addition, there were seven workers in the business office and also two representatives of the local chapters of Phi Delta Kappa who assisted with the work of the council. It is interesting to note that the average distance traveled by delegates was 794 miles and that the travel distance of all would stretch five times around the earth at the broadest section and still leave some mileage to spare. The average age of the delegates attending the council was thirty-six years. The council was indebted to Brothers Eggert and Brown, members of Zeta Chapter, for the statistical information which appeared in their special council editions of *Phi Delta Kapp-tions.* We are also indebted to J. M. Sexton of Ventura, California, for two beautiful pots of huge poinsettias which he had shipped from his own garden in California.

The council was organized in committees to which were assigned all items of agenda. The committees named were as follows: credentials, delegates' expenses, time and place, planning and policies, budget, business procedures, projects and publications, standards and ethics, chapter activities, field organization, cooperation with other professional organizations, constitution and by-laws, and resolutions. It is the purpose of this report to summarize the reports of these committees which resulted in affirmative legislation by the council.

The reports of the credentials committee and delegates' expenses committee were largely routine in character and were adopted by the council as presented. The report of the committee on time and place recommending Chicago as the meeting place and a three-day session to be held between the dates of December 26 and January 1, 1941, was adopted by the council. The choice of Chicago as the meeting place was based upon the cost per delegate for transportation expense since the committee found that Chicago is definitely the central point in terms of transportation both as to convenience and as to total cost.

The following proposals of the planning and policies committee were adopted by the council. 1. That the present plan of representation and balloting in the council be continued and that that idea of proportional balloting be abandoned. 2. That alternates seated in the national council and district conferences be given all rights of delegates in general sessions and in committee meetings except the right to vote. 3. That state coordinators as such are not to be delegates to the national council. 4. That the plan of having an exhibit at the meetings of the A.A.S.A. be continued indefinitely at the discretion of the executive committee. 5. That the established plan of biennial meetings of the national council be continued.

6. That the council recommend to the executive committee that the present policy of renting housing quarters for the national office be continued. 7. That the present wording of the "white clause" be retained. The clause reads as follows: "Only white males of good character should be eligible to membership in this fraternity." This issue was discussed at length and the proposal of the committee finally adopted with a chapter vote of fifty-five affirmative, twenty-six negative and seven not voting. 8. That the publications already under way be continued but that the publication of a directory not be undertaken. 9. That the following general statement of policy be approved.

(a) The primary interest of the fraternity is and should be centered in the personal relationships and local activities of the individual chapters and that the activities of the national organization can be justified primarily as they contribute to this fundamental purpose. A primary function of the national organization shall be the stimulation of an intelligent consideration of all matters of general policy by every member of all local chapters. (b) Matters of general policy shall be decided by the national council and the function of the national officials shall be the implementation of the policies.

In order to make the policy effective, provision was made for an interim committee to study the present constitution and by-laws in the light of the above statement of policy and to recommend appropriate changes to the next national council.

The report of the budget committee setting up a budget for general administration and publication of THE PHI DELTA KAPPAN amounting to $33,235 for the thirty-second fiscal year and $33,935 for the thirty-third fiscal year was adopted. Supplemental appropriations included the following items for the ensuing biennium:

For *Education Abstracts*	$3,000
For the dictionary of education project	$6,700
For special council committees	$ 500
For executive committee contingency fund, per year	$1,000
To supplement the current administrative and publications budget	$3,700

The proposals by the committee on business procedures which were adopted by the council, some of which are subject to ratification by the chapters in a referendum, were as follows: 1. That a member not in good standing may be enrolled in any chapter of his choice and may regain good standing by the payment of his obligation for dues and arrears, the payment to be made to the chapter in which he seeks enrollment, provided that he has no financial obligation, other than dues, to the chapter from which he seeks to be released. 2. That the minimum initiation fee shall be increased to include the annual dues for the fiscal year following the fiscal year of initiation to insure good standing for a minimum of two years. 3. That the official receipt for annual membership dues shall be mailed direct to the member by the national office. 4. That THE PHI DELTA KAPPAN shall be mailed to members in arrears until December 31st following the expiration of good standing on May 31st as a means of encouraging prompt reinstatement to good standing. 5. That the method of electing District Representatives and State Coordinators shall be simplified and made more direct. 6. That amendments to the constitution and by-laws must be submitted to the chapters for ballot within sixty days after receipt in the national office except during the inactive period, April 15 to September 15, when referenda are not permitted. 7. That the current practice of sending chapter records to the national office for an annual audit be modified so that the national office will be relieved of this responsibility as an annual obligation, but that the national office retain the right to call in the records of any or all chapters whenever it deems it advisable. Further, that the audit form which is now sent to chapters be continued and expanded to include other details which the national office may need to keep its files up to date and to check against the accumulated chapter records in the national office files.

The following proposals by the committee on projects and publications were adopted by the council: 1. That the abstracts of research studies selected by the national committee on dissemination of research be published in *Education Abstracts* and that the balance of the fund appropriated for that committee be transferred to the account of *Education Abstracts*. 2. That the guidance project for the selection and direction of worthy young men into the teaching profession be continued with renewed emphasis on the sale and placement of *Teaching as a Man's Job*. Specific ways of accomplishing the desired result where indicated. 3. That chapters desiring to experiment with a Phi Delta Kappa flag should do so and present a sample of the flag with a statement of uses and results to the next council. 4. That a national committee be appointed to investigate the cruciality of the problem of freedom of teaching and learning, and that this committee present a report of progress in THE PHI DELTA KAPPAN; also that a special issue of the magazine dedicated to the subject be given serious consideration by the editorial board. 5. That a directory of membership be not published at this time due to the cost of such a project and the need for conserving fraternity funds for other purposes. 6. That the

present policy of publishing special issues of THE PHI DELTA KAPPAN be continued and that a study of the cover format be made with a view to improving the typographical layout and the cover stock. 7. That the practice of mailing back issues of THE PHI DELTA KAPPAN to initiates be discontinued. 8. That provision be made for a clearinghouse section in THE PHI DELTA KAPPAN on current chapter activities. 9. That the publication of *Education Abstracts* by Phi Delta Kappa be continued for two years, that there be an additional appropriation of $3,000 authorized in its support, that the next two volumes be published in eleven issues each instead of five issues per volume as heretofore, that various means of promoting the enterprise by chapters, individuals, and the national office be encouraged, and that various methods of securing additional abstracts of research material be developed. 10. That the project for publication of the *Dictionary of Education* should take precedence over all other projects and that an appropriation of $2,250.00 for 1940 and $4,450.00 for 1941 should be made from the reserve fund in support of the project.

The report of the committee on standards and ethics contained the following provisions which were adopted: 1. That the present minimum standards for new chapters as listed in the current edition of the Constitution and By-Laws are adequate and should be maintained and that future petitions for new campus chapters, when submitted by the national executive committee for ballot, should be accompanied by a full report of the circumstances in each case. 2. That a member must be in good standing at the time he purchases Phi Delta Kappa jewelry. 3. That an interim committee be appointed to study the situation in unorganized states such as Montana, the committee to make such proposals as may seem advisable regarding the creation of campus chapters in such areas.

The committee on chapter activities made recommendations which were adopted as follows. 1. That the interim committee on chapter activities be continued and that the handbook on chapter activities be completed and published after review of the manuscript by those who have been most helpful thus far. 2. That chapter news letters be exchanged with other chapters as widely as chapter finances will permit. 3. That each chapter appoint a special committee whose specific function it would be to cooperate with the national office in making the most effective use of *Teaching as a Man's Job,* stimulating research activities, and presenting the merits of *Education Abstracts* with a view to increasing subscriptions. 4. That the chapter program committee become familiar with effective programs in other chapters with a view to increasing the effectiveness of their own chapter programs. 5. That an interim committee be appointed to determine the extent to which chapter by-laws are in existence, have been approved by the national executive committee, are on file in the national office, and are in conformity with the national constitution and by-laws. 6. That the present general practice of closed meetings for initiation of new members be encouraged especially during that part of the ceremony involving the use of the national ritual and that the right of chapters to develop additional procedures for use in open initiation be recognized.

The report of the committee on field organization was accepted as a whole and referred to other committees for further consideration and presentation to the council. It was later adopted by the council as to policies involved. The essential points presented in the report are covered in the above summaries.

The committee on cooperation with other professional organizations presented a report recommending cooperation with other professional organizations in serving educational needs. The report was adopted as a whole.

The committee on constitution and by-laws presented a series of reports to revise the constitution and by-laws in conformity with the legislation adopted by the council and in some instances to clarify the present documents. These will be presented to the chapters for ballot and when adopted will be reported to the membership. In the meantime the present printed constitution and by-laws will prevail.

The election of national officers was held in the final session of the council. Nominees for the several offices were as follows:

For President: Ira M. Kline and Tom C. Holy.

For Vice-President: Arnold E. Joyal, Fred Stetson, and J. V. Breitwieser.

For Secretary: Theodore A. Seidle, L. L. Standley, and Ullin W. Leavell. (Francis F. Powers was renominated but declined to accept the nomination.)

For Treasurer: Allan R. Congdon.

For Historian: John H. Aydelotte and C. C. Trillingham.

The following officers were elected to serve the fraternity in the next biennium.

Ira M. Kline, National President; Fred Stetson, National Vice President; Ullin W. Leavell, National Secretary; Allan R. Congdon, National Treasurer; John H. Aydelotte, National Historian.

The above officers will take office on March 1, 1940.

The next issue of THE PHI DELTA KAPPAN will report the nominees for District Representatives in the seven districts and will carry an official ballot for individual member voting. Only official ballots will be recognized in the election.

DICTIONARY

Origin and Sponsorship of the Project.—Phi Delta Kappa voted at the Cincinnati meeting of the national council (December, 1937) to sponsor preparation of a comprehensive educational dictionary. This action had been preceded by a period of preliminary work to which a number of individuals and organizations contributed. The Dictionary of Education is under the supervision of a committee (appointed by the executive committee of Phi Delta Kappa) whose membership consists of: Carter Alexander, Columbia University; W. W. Charters, Ohio State University; Paul M. Cook, *ex-officio,* executive secretary, Phi Delta Kappa; H. D. Rinsland, University of Oklahoma; W. Ray Smittle, Wayne University; and Carter V. Good, chairman, University of Cincinnati, who is in charge of the editorial office at Cincinnati.

Plans for Completion of the Dictionary.—During the Christmas holidays, at the Chicago meeting of the National Council of Phi Delta Kappa, plans were approved for completion of the Dictionary of Education. The sequence of steps for the next two years is approximately as follows:

1. Completion of preliminary work of definition by approximately 150 coordinators or specialists and their assistants working in as many subdivisions of education by December, 1940.

2. Submission of definitions for criticism to other experts in the appropriate fields early in 1941, followed by any necessary revisions to be made by the original authors of the definitions.

3. Editing of copy for release to the publisher by December, 1941.

4. Proofreading early in 1942.

The national council also authorized the national executive committee to sign a contract with McGraw-Hill Book Company for publication and sale of the dictionary, which will be made available at a special discount to members of Phi Delta Kappa. Royalties will accrue to the fraternity in return for the support given to the project.

Purpose and Contribution.—The primary purpose is to prepare a comprehensive dictionary of technical terms in education which will do for educational workers and teachers what already has been accomplished by technical dictionaries for practitioners in such special fields as medicine, law, engineering, and psychology. The dictionary wll promote greater clarity and consistency of usage in educational literature and in classroom instruction. Since the plan is one of sponsorship by Phi Delta Kappa through a supervisory committee, and of cooperative participation in the definition of terms by coordinators or key men in various chapters who are enlisting the aid of their associates, advanced classes, and seminars, the stimulation given to local chapters and to individuals through cooperative effort should be as valuable to Phi Delta Kappa as is the dictionary itself to the field of education.

The Master List of Words and the Handbook.—The first step was the preparation of a master list of words and a handbook of procedure, under the supervision of the Committee on Dictionary of Education. The list of words has been mimeographed in the form of a 122-page booklet, including some 19,000 entries. The 22-page handbook of information also has been issued in mimeographed form. It deals with the dictionary project in terms of origin and sponsorship, purpose and contribution, scope and delimitation, a description of the master list of words, subdivisions of education included, illustrative definitions, bibliography on educational terminology, and matters of form. The list of terms and the handbook have been placed in the hands of coordinators or specialists representing some 150 subdivisions of education, and also have been distributed to the various officers and chapters of Phi Delta Kappa.

At a later date the complete list of 150 or more specialists will be made available through the columns of the PHI DELTA KAPPAN.—CARTER V. GOOD.

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Alpha Gamma Campus Chapter—State College of Washington. Norman Marshall, Box 247, College Station, Pullman, Wash.

Sigma Field Chapter—Portland, Oregon. Willard McClure, Edison Boys High School, Beech and Mallory Streets, Portland, Ore.

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Alpha Upsilon Campus Chapter—University of Utah. W. Melvin Strong, Stewart Training School, University of Utah, Salt Lake City, Utah.

Alpha Chi Campus Chapter—University of California at Los Angeles. Robert Krueger, 210 Education Building, 405 Hilgard Ave., Los Angeles, Calif.

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Epsilon Field Chapter—Los Angeles, California. Herman F. Winn, 1639 W. 82nd Street, Los Angeles, Calif.

Eta Field Chapter—Santa Barbara, California. W. Fred Newcomb, 235 Cedar Street, Ventura, Calif.

Xi Field Chapter—Sacramento, California. William J. Burkhard, Assistant Director of Research, Sacramento Public Schools, Sacramento, Calif.

Tau Field Chapter—Salt Lake City, Utah. Arthur E. Arneson, 440 E. First South, Salt Lake City, Utah.

Omega Field Chapter—San Diego, California. John Lamott, 4430 Oregon Street, San Diego, Calif.

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Theta Field Chapter—Kansas City, Missouri. O. H. Cobesky, 9610 E. 7th Street, Kansas City, Missouri.

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Omicron Field Chapter—Kirksville, Missouri. C. H. Allen, State Teachers College, Kirksville, Mo.

Pi Field Chapter—San Antonio, Texas. Francis de Bergue, 1[illegible] Stratford Court, San Antonio, Texas.

Rho Field Chapter—Pittsburg, Kansas. [illegible] State Teachers College, Pittsburg, Kan.

Phi Field Chapter—Tulsa, Oklahoma. Earl [illegible], 1303 Terrill Ave., Tulsa, Okla.

Alpha Alpha Field Chapter—Houston, Texas. L. C. McDonald, 1500 Lovelace, Houston, Tex.

DISTRICT NO. 4.

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Eta Campus Chapter—University of Minnesota. Robert Koenker, Room 11, Library, University of Minnesota, Minneapolis, Minn.

Omicron Campus Chapter—University of Nebraska. W. H. Hamilton, Teachers College, University of Nebraska, Lincoln, Nebr.

Alpha Theta Campus Chapter—University of North Dakota. Alfred S. Nehring, Box 546, University Station, Grand Forks, North Dakota.

Alpha Mu Campus Chapter—Colorado State College of Education. Dudley Fitchford, Treasurer, Colorado State College of Education, Greeley, Colo.

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Alpha Xi Field Chapter—Des Moines, Iowa. W. C. Findley, [illegible] Third Street, Des Moines, Ia.

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Pi Campus Chapter—University of Illinois. Wilbur R. Hamblin, 102 University High School, Urbana, Ill.

Sigma Campus Chapter—Ohio State University. Raigh Reisner, Education Bldg., Ohio State University, Columbus, Ohio.

Upsilon Campus Chapter—Northwestern University. Richard Gadske, Log Cabin Church, Niles Center, Ill.

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Omega Campus Chapter—University of Michigan. William Fleckenstein, 4007 University High School, University of Michigan, Ann Arbor, Mich.

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(Continued from inside back cover)

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Alpha Nu Field Chapter—Toledo, Ohio. Roy A. Welday, 1535 Craigwood Road, Toledo, Ohio.

Alpha Omicron Field Chapter—Charleston, Illinois. Raymond E. Gregg, Eastern Illinois State Teachers College, Charleston, Ill.

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ALPHA PSI CAMPUS CHAPTER—University of Buffalo. Louis Rosetti, 3335 Main Street, Buffalo, N. Y.

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ALPHA BETA CAMPUS CHAPTER—University of Virginia. A. M. Jarman, Room D, Peabody Hall, University of Virginia, University, Va.

ALPHA KAPPA CAMPUS CHAPTER—University of Tennessee. J. J. Fuller, Box 4226, University of Tennessee, Knoxville, Tenn.

ALPHA XI CAMPUS CHAPTER—University of Alabama. C. E. Williams, College of Education, University of Alabama, University, Ala.

BETA ALPHA CAMPUS CHAPTER—Louisiana State University. W. A. Lawrence, Room 220, Allen Hall, Louisiana State University, University, La.

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